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REPORT
ON THE
SANITARY ADMINISTRATION OF THE PUNJAB
AND
PROCEEDINGS OF THE SANITARY BOARD
FOR THE YEAR

BY
H. HENDLEY, COLONEL, M.D., K.H.S., I.M.S.,
Offg. Sanitary Commissioner, Punjab.

AND
THE REPORT ON SANITARY WORK FOR 1915

BY
MR. V. STANTON,
Offg. Sanitary Engineer, Punjab.



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(Separate Report.)

Section VIII.—Sanitary Works, Military.

No Remarks.



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(The text of the Sanitary Report is limited to 20 pages and that of the Sanitary Engineer to 4 pages.)

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Proceedings of His Honour the Lieutenant-Governor of the Punjab in the Home (Medical and Sanitary) Department, No. 83-Sanitary-1, dated 5th July 1916.

READ—

The Report on the Sanitary Administration of the Punjab for the year 1915 by Colonel H. Hendley, I.M.S., Officiating Sanitary Commissioner, Punjab.

REMARKS.—The character of the seasons during the year had a marked effect on the health of the province. Unusually heavy rain in March and the beginning of April retarded the development of normal hot weather actions, thus prolonging and accentuating the severity of the worst epidemic of plague since 1907. On the other hand, the practical failure of the monsoon and consequent abnormally dry weather during the remainder of the year resulted in the disappearance of plague in June and its reappearance later in the year only on a very small scale. To the same cause was due the almost entire absence of malaria in epidemic form. The price of food grains remained unusually high throughout the year.

2. There was a fall in the general birth-rate of 2·7 *per mille* as compared with the previous year. The birth-rate in 1914 was, however, exceptional, and a much larger decrease was to be expected than actually occurred. Compared with the average of the previous five years the rate was only 1·3 in defect, while in five districts it was actually higher than in 1914. The decrease was greatest in the Gujrát and Multán districts, amounting to over 5 *per mille* compared with the quinquennial average and to 7·8 and 6·8, respectively, compared with the previous year. The fall is attributed partly to the effect of plague and partly to the absence on military service of so many young men and men in the prime of life. In Rohtak and Gurgaon, however, the rates were over 50 *per mille*,—an excess of 26 *per mille* over the death-rates. As the former is one of the best recruiting districts in the Province too much stress cannot obviously be laid on the second of the reasons given for the reduction in the number of births.

3. There was a considerable rise in the death-rate, from 32 to 36·3 *per mille*. This was chiefly due to plague, but cholera and respiratory diseases were contributory causes. The figures with regard to infant mortality, however, show a very marked improvement. Calculated on the number of births during the year the mortality among male infants works out at 188·02 and among female infants at 189·17 as compared with 208·98 and 211·38, respectively, in 1914—figures which themselves were better than those of the previous year. March, April and May were the unhealthiest months, plague being then at its height, while the months from September to December, usually marked by an epidemic of malaria, were healthier than any other period of four months in the year. The death-rate was highest in the Rawalpindi District, and was above the provincial rate in eleven other districts. It was less than 20 *per mille* in the Dera Gházi Khan and Simla districts and less than 30 *per mille* in ten other districts.

4. The general death-rate in towns was practically the same as that in rural circles, but there were considerable differences in respect of the various causes of death, the rural rate for plague being 6·03 in excess of the urban rate, while respiratory diseases accounted for 3·24 *per mille* more deaths in towns than in country circles. In the smaller towns of the province the variations in the rates were very marked, ranging from 2·40 in Gojra to 68·96 in Gohána. Sixteen other towns had rates of over 50 *per mille*, the high mortality in most cases being due to plague. Of the three principal towns in the province, Amritsar was the most unhealthy with a death-rate of 43·5 as compared with 33·59 in Lahore and 33·14 in Multán. The chief cause of this difference is to be found in the high mortality from respiratory diseases which amounted to 14·44 in Amritsar as compared with 4·97 in Lahore and 5·27 in Multan.

5. Inspection of birth and death registers revealed the normal percentage of omissions. In the Government of India resolution on scientific sanitation which was published in 1914 stress was laid on the want of complete and accurate vital statistics as constituting an impediment in the way of sanitary reform. The remarks of the Government of India in this connection were brought to the notice of local bodies, and a project has been approved for obtaining accurate registration in a selected area by means of a special staff. The realization of this project, however, awaits the return of normal financial conditions.

6. The number of deaths registered as due to cholera was 13,196, the largest number in any year since 1903. Deaths were reported from every district in the province, 69 towns and 1,678 villages being infected. The Ferozepore and Lahore districts with 2,890 and 2,657 deaths, respectively, were the worst sufferers, while among towns the number of deaths was highest in Kasúr, Gohána, Amritsar, Lahore and Kunjah. As in 1903 the chief cause of the outbreak is to be found in the infection spread by pilgrims returning from the great Hardwar Kumb fair, but a further centre of diffusion was the Ghariala fair in the Kasúr Tahsil; while in the Gujrát District the epidemic started from local causes in two villages, in one case being due to the eating of the flesh of a diseased ox, and in the other to the drinking of water from a polluted well in a graveyard. The experience of the year has thus still further emphasised the importance of controlling the sanitary arrangements at all large fairs, and in this direction good work is being accomplished. Special arrangements are made at the larger fairs under the supervision of the Additional Deputy Sanitary Commissioner, and during the year schemes for the supply of pure water to the fair areas at Gullu Shah and at Núrpur in the Ráwalpindi District have been approved and assisted by grants-in-aid from the Sanitary Board.

7. Only 1,694 deaths were due to small-pox, the lowest number recorded since registration of deaths was introduced. Eleven districts of the province were practically free from the disease. The death-rate from fevers was, however, again very high, amounting to 14.73 *per mille*, though this figure represents an improvement on the previous year which is accounted for by the almost entire absence of malaria in epidemic form. The rate was proportionately highest in the Multan Division, where 56,752 deaths out of a total of 82,268 were attributed to this cause. No satisfactory explanation is afforded of the very large increase from 9.55 to 30.12 recorded in Murree which had a higher rate than any other town. On the whole, the towns shared in the general decrease but the rate remained high in Khángarh, Karor, Bhakkar, Shujabad, Kamália and Alipur.

8. It has already been observed that the epidemic of plague with which the Province was afflicted in 1915 was the worst since 1907. Twelve districts suffered severely, and a total of 244,104 deaths was recorded. The epidemic had commenced in the latter portion of 1914 and the full effects were felt in the first half of 1915. There was, however, but little recrudescence in the latter half of the year owing to the abnormally hot weather and the efforts of the plague staff in treating the worst infected areas. His Honour is glad to observe that despite the severity of the epidemic the special staff were able to afford general medical relief to a large number of persons. He is convinced that no better means exist of gaining the confidence of the people and thus facilitating the introduction of the various measures by which plague can be effectively controlled if not overcome. It is also gratifying to find that some local bodies entertained paid agents to assist in the work, and that much valuable voluntary help was forthcoming.

9. The increase in the recorded number of deaths from respiratory diseases is a disquieting feature of the year, but is no doubt very largely due to improved diagnosis. At the same time the heavy toll that is taken by tuberculosis of the lungs especially in towns cannot be disregarded, and His Honour

trusts that the question will receive the fullest consideration from local bodies. Much indeed depends on the personal habits of residents in towns, but it is one of the foremost duties of the authorities responsible for the health of towns to see that the conditions so favourable to this disease, crowded houses, narrow and sunless lanes, and generally the want of air and light which are such conspicuous features of the larger towns in the province, shall not be perpetuated or reproduced in future extensions or alterations.

10. Eight lakhs were originally allotted to the Sanitary Board for distribution among local bodies, but it was subsequently found necessary, for financial reasons, to withdraw more than half this sum. Over $3\frac{1}{2}$ lakhs were, however, distributed by the Board in aid of urban drainage and water-supply schemes and about Rs. 15,400 for rural sanitation.

One of the main obstacles in the way of utilising the allotments for rural sanitation has been the rule that a grant-in-aid of a sanitary scheme shall only be made when half the cost of the work is provided from local sources. The subject of rural sanitation has been engaging the close attention of Government, and the question of passing a special Act on the lines of the United Provinces Village Sanitation Act has been carefully examined. It has, however, been decided that for the present such an Act is not required, and that the Punjab District Boards Act provides all the administrative machinery necessary. In several districts the adoption of simple regulations under this Act to promote the sanitation of villages has been approved, and in a number of cases villages have agreed to the imposition of taxation in order to meet the cost of elementary measures of conservancy. In such cases when there is an evident desire on the part of the inhabitants for sanitary progress His Honour considers that the strict requirements of the rule may be waived and that grants in aid of sanitary works may be given, provided the principle of self-help is not disregarded, even when half the cost of such works cannot be raised by local contributions. With regard to urban sanitation there are no fresh developments to record, but drainage and water-supply schemes figure prominently in the activities of most municipalities. An experiment in the administration of quinine to school children, which was made in Amritsar in the autumn of 1914, met with considerable success. The results achieved are being brought to the notice of selected municipalities which are being recommended to adopt a similar scheme modified in the light of the experience gained at Amritsar. The acknowledgments of Government are due to the many individuals mentioned in paragraph 39 of the report who have constructed works of public utility; the public spirit shown by the Jats and Mahajans of the Ambala Division in this matter merits special mention.

11. The post of Sanitary Engineer to Government was held by Mr. A. S. Montgomery up to the end of September and by Mr. V. Stainton for the rest of the year. Mr. Stainton's report gives an interesting account of the various sanitary works in progress throughout the province and a summary of the many schemes which have been prepared but have not yet been put in hand. It is, however, distressing to learn that many completed sanitary schemes were found to be in a very neglected and deplorable condition through lack of proper maintenance and supervision. His Honour trusts that the instructions recently issued to local bodies regarding the regular inspection of machinery and plant by expert firms will be carefully followed.

Colonel C. J. Bamber held charge of the post of Sanitary Commissioner in addition to his own duties until the middle of July when he was succeeded by Colonel Hendley. His Honour's acknowledgments are due to both these officers for the readiness with which they undertook the additional responsibilities involved in this charge and to Colonel Hendley for an interesting report. The posts of Deputy Sanitary Commissioner and Additional Deputy Sanitary Commissioner were held throughout the year by Major W. C. H. Forster, I.M.S., and Dr. Khwaja Abdurrahman, respectively, and His Honour desires to express his appreciation of their services.

ORDER.—Ordered that a copy of the foregoing remarks be circulated with the report and be furnished, with the usual number of copies of the report, to the Government of India; also that the review be published in the *Punjab Government Gazette*.

Ordered, also, that a copy be furnished to the Sanitary Commissioner, Punjab, for information.

By order of His Honour the Lieutenant-Governor of the Punjab,

O. F. LUMSDEN,

Financial Secretary to Government, Punjab.

SANITARY DEPARTMENT.

MEMO. OF ERRATA.

In the Annual Sanitary Report of the Punjab for 1915.

1. On page 13, paragraph 26, line 24, for "18·80" read "18·08".
2. On page 15, paragraph 38, line 13, for "from neglect" read "their neglect".
3. On page 19, paragraph 49, line 6, for "66" read "68".
4. Annual Form No. IV, Ambala, against all other causes, sub-column 14, for "60" read "50".
5. Annual Form No. IX, against Ambala, sub-column 22, for "11·73" read "11·78".

Printers' Mistakes.

1. Annual Form No. IV, Shahpur, against plague, sub-column 24, for "4 2" read "482".
2. Annual Form No. IV, Shahpur, against fevers, sub-column 14, for "15" read "154".
3. Annual Form No. IV, Lyallpur, against total sub-column 26, for "110-7" read "11,087".
4. Annual Form No. IV, Total for the Province, against respiratory diseases sub-column 26, for "218 1" read "21,871".
5. Annual Form No. IV, Ratio per 1,000 living for the Province, against small-pox, sub-column 23, for "0·00" read "0·001".
6. Annual Form No. IV, Ratio per 1,000 living for the Province, against dysentery and diarrhoea sub-column 21, for "0·8" read "0·80".
7. Annual Form No. V, against Simla, sub-column 16, for "1·9" read "1·95".
8. Annual Form No. V, against Multan, sub-column 17, for "23·7" read "23 76".
9. Annual Form No. V, against Dera Ghazi Khan, sub-column 4, for "57-50" read "57,550".
10. Annual Form No. VI A, against Gurgaon, sub column 27, for "45·5" read "45·51".
11. Annual Form No. VI A, against Gujrat, sub-column 13, for "2" read "26".
12. Annual Form No. VI A, against Lyallpur, sub-column 24, for "0·-9" read "0·39".
13. Annual Form No. VI A, against Muzaffargarh, sub-column 23, for "0·-6" read "0·16".
14. Appendix to annual Form No. VI B, against Jullundur Cantonment, sub-column 17, for "18" read "18".
15. Annual Form No. IX, against Dera Ghazi Khan, sub-column 21, for "3,098" read "8,098".
16. Annual Form No. XI, against Ambala, sub-column 11, for "2 5" read "255".
17. Annual Form No. XII, against Rawalpindi, sub-column 17, for " " read "18".
18. Annual Form No. XII, against Attock, sub-column 17, for " " read "4".

Section I.

MR. GILBERT T. WALKER, C.S.I., M.A., Sc.D., F.R.S., Director-General of Observatories, has kindly furnished the following brief summary of the chief meteorological features of the Punjab during the year 1915 :—

Chief meteorological features.

During January rainfall occurred mainly on the 16th, 17th, 23rd and 24th, and was confined almost entirely to the eastern and northern parts of the province, but even there the recorded amounts were generally short of the small normal for the month. During February wide-spread rain fell on the 3rd, 4th, 7th and 8th, but dry weather set in and continued up to the 8th March when a winter storm from Persia introduced general rainfall lasting for four days. This disturbance was followed at intervals by three or four others of the same type, and the last two of the series caused good rainfall over the east and north Punjab during the second week of April. In the Simla Hills snowfall occurred down to unusually low levels as late as April 7th. The rainfall of both March and April was distinctly heavier than usual and one of its important effects was to retard materially the development of the normal hot weather actions. In May accordingly there were fewer duststorms and thunderstorms than usual and the rainfall was upwards of 50 per cent. in defect. Marked hot weather conditions prevailed in June and frequent showers were recorded, but as there were no incursions of damp sea winds, such as ordinarily occur, the month's rainfall although normal in the south-west of the province was as much as 44 per cent. below the average in the north and east Punjab. The monsoon currents were exceedingly weak and fitful from July to about the middle of September and the rainfall due to them was light and occurred sporadically. Between September 12th and the 4th October the monsoon was very active and good rain fell in the northern and eastern parts of the province, but it failed to extend into the south-west Punjab. During the rest of the year save for light rainfall in December 1915 the weather was drier even than usual.

In brief the weather was more open than usual in January and February, abnormally wet in March and the first half of April and unusually dry during the rest of the year with the exception of the interval between September 12th and the 4th October when a much-needed burst of rainfall occurred. Normally the final cessation of the summer rains in the Punjab takes place about the middle of September.

In January, July, August and November, the months of abnormally dry weather, cloud amount was in decided defect. Humidity was high in the first four months and low in July and August when a marked drought prevailed over the province. The maximum temperature departed to no great extent from the normal except in May, July and August when it was 4° or more in excess; the minimum was higher than usual by 5° in May and by 3° in July and September, and fairly normal in the rest of the year.

2. The usual return furnished by Mr. L. French, C.I.E., I.C.S., Director of Land Records, Punjab, shows that the average retail price of wheat was $8\frac{1}{2}$ seers per rupee at Ambala, $8\frac{3}{4}$ at Lahore, $8\frac{7}{8}$ at Rawalpindi and $9\frac{1}{4}$ at Multan during the year 1915.

Price of food-grains.

The average rates of barley were 13 seers at Ambala, $14\frac{1}{4}$ at Lahore, $14\frac{1}{8}$ at Rawalpindi and $12\frac{3}{4}$ at Multan, and that of jowar $10\frac{3}{16}$, $11\frac{3}{8}$, $11\frac{1}{16}$ and $12\frac{1}{8}$, respectively. As regards bajra, the average rates varied from $9\frac{5}{16}$ to $10\frac{3}{16}$ seers at the principal markets of Ambala, Lahore, Rawalpindi and Multan, that of maize $10\frac{1}{4}$ to $11\frac{1}{4}$ and that of gram $11\frac{1}{2}$ to $12\frac{7}{16}$ seers per rupee.

Except in the case of gram, there was a general rise in the price of food-grains as compared with the preceding year, which is due to the war and the failure of the monsoon. The fall in the price of gram is due to less exports to the United Provinces and the bumper crop of 1915.

3. The first survey on wages taken in December 1912 will stand until the next survey which will be held in 1917.

Wages of labour.

Section V.—Vital Statistics.

4. Though the question of basing our statistics on an estimated population throughout the Report has been deferred for the present, yet for comparison an estimated population has been prepared and a few ratios worked out to show the difference made in the ratios calculated on this population and that of the previous census. The birth rate on the estimated population is 41·0 *per mille*, this is 2·6 less than the rate calculated on the census figures. The difference in individual districts varies and is as high as 4·9 in Lyallpur and as low as 0·6 in Rawalpindi, while in Simla the rates are the same. In the case of deaths, the rate for which is 34·1, there is a decrease of 2·2 over the rate calculated on the census figures and here also the rates in individual districts varied but not to the extent that they did in the case of births. The decrease was greatest in Ferozepore 3·0 and least in Rawalpindi 0·8, while in Simla there has been an increase of 0·1. The population in all the districts except Simla has increased since the census of 1911 and now amounts to 20,573,733 instead of 19,337,146, i.e., an increase of 6 per cent. The population in Lyallpur has increased by 12 per cent., Ferozepore and Montgomery 10 per cent., Hissar, Jhang and Multan 9 per cent., Rohtak, Lahore and Mianwali 8 per cent., Ludhiana and Shahpur 7 per cent. and Gurgaon, Sialkot and Muzaffargarh 6 per cent. In the others it varied between 2 per cent. in Rawalpindi and 5 per cent. in Karnal, Jullundur, Amritsar, Gurdaspur, Gujranwala, Gujrat, Attock and Dera Ghazi Khan, Simla being the only district with a reduction of 68 or 0·2 per cent. The population of Simla however is so small that this slight decrease in it need not be considered.

5. But for plague which caused a death rate of 11·48 *per mille* the year 1915 was an exceptionally healthy one and excluding plague deaths the death rate is lower than it has ever been since 1877. With the exception of cholera and respiratory diseases which accounted for more deaths than in recent years no other cause of mortality except plague showed an increase while the reduction in the death rate from fevers compared with the two previous years and the quinquennium is most satisfactory and is due, no doubt, to the partial failure of the monsoon. The birth rate is not so satisfactory but compares favourably with the average for the previous five years and is only a little less than it was in 1911, 1912 and 1913. The birth rate in the previous year 1914 was exceptionally high and as in 1899 has been followed by a year in which the birth rate is much less, though in the year under report the decrease has not been nearly so great as it was in 1900.

6. **Births.**—The total number of births this year was 843,012 of which 440,955 were males and 402,057 females, the respective rates being 43·6, 22·8 and 20·8. Compared with the previous year there is a total decrease of 2·7 *per mille* though the quinquennial average is only 1·3 in excess. The birth rate this year has presumably been affected by plague and perhaps partly by the absence of young men and those in the prime of their life at the war. Last year's birth rate was exceptional and the rates for the two years previous to it were also high, so the quinquennial average was higher than it usually is; the birth rate for this year showing a decrease therefore when compared with these rates does not mean that it was exceptionally low, on the contrary it may be regarded as a fairly average rate. A remarkable fact about the birth rate is that after a year in which it is exceptionally high it is usually followed by one in which the rate is either very low or lower than that for the previous five years, e.g., 1883, when it was 39·00 followed by 20·01 in 1884, in 1899 48·4 followed by 38·8 the following year. I do not quote 1909 for there were special reasons for the great decrease which was explained at the time in the report for that year.

7. The Central Provinces again shows the highest birth-rate 47·95 and the Punjab comes next with 43·60. The other provinces recorded rates in the following order:—United Provinces 43·48, Bihar and Orissa 40·4, Bombay 37·10,

Burma 35·13, Assam 33·60, Bengal 31·80, North-West Frontier Province 31·73 and Madras 31·2.

8. The provincial birth-rate shows a decrease of 1·3 *per mille* compared with the quinquennial average; this decrease was shared by all the districts in the province except Hissar, Rohtak, Gurgaon, Simla, Kangra, Mianwali, Jhang and Dera Ghazi Khan. Compared with the previous year the decrease is greater and amounts to 2·7, while individually only 5 districts have a higher birth-rate than in the year preceding, namely, Simla, Kangra, Rawalpindi, Mianwali and Jhang, and it is satisfactory to note that among these districts Simla, Kangra, Mianwali and Jhang have a higher birth-rate than their respective quinquennial averages and the rates for the year preceding. The decrease was greatest in Gujrat, Multan, Ferozepore, Amritsar, Montgomery, Ludhiana and Lyallpur, where it was 5·4, 5·3, 2·3, 2·2, 2·5, 1·0 and 2·3, respectively, compared with the quinquennial average, and 7·8, 6·8, 5·7, 4·9, 4·8, 4·8 and 4·1 with that of the previous year. In the remaining districts the increase or decrease did not exceed 3·9 and was as low as 0·1.

9. In the principal towns of the province, *i.e.*, those with a population of 10,000 or upwards, 38 in number, the same as last year, the rate amounted to 43·4 as compared with 45·4 the previous year and 43·7 the average for the previous five years. Of the three largest of these Amritsar accounted for the highest rate 44 *per mille*, Multan coming next with 41 and Lahore 38. With the exception of Lahore, in which the rate is the same as in the previous year, the other two have lower rates than in the quinquennium and the year preceding.

10. The highest birth-rate, 51·3 was recorded in Rohtak, Gurgaon closely following with 50·2, Hissar 49·1 and Amritsar 48·1. The lowest rate was registered in Simla 21·3, next to this comes Dera Ghazi Khan with 31·1, Muzaffargarh 34·6, Jhelum 35·6, Attock 37·0 and Multan 37·1. In the others it varied from 38·7 in Kangra to 47·9 in Karnal. The provincial rate of 43·6 was exceeded in 12 districts out of the 28 in the Province.

11. The natural increase of population, *i.e.*, excess of births over deaths amounted to 7·3 *per mille* in the year under report. Among those districts which had an excess of births Rohtak and Gurgaon, both districts, which have a high birth-rate headed the list, the excess amounting to no less than 26·5 and 26·0, respectively, Lyallpur had an excess of 21·4 and Hissar 20·9. In the others it ranged from 19·9 in Jhang to 0·1 in Sialkot. This increase was observed in all but 6 districts, namely, Jullundur, Amritsar, Gujrat, Jhelum, Rawalpindi and Attock. The excess of deaths over births was greatest in Rawalpindi 18·3, Gujrat 15·6 and Jhelum 13·2, in the other three districts it varied between 3·7 and 4·2.

12. **Deaths.**—The death-rate during the year under report which amounted to 36·3 *per mille*, accounted for 702,550 deaths, 359,821 males and 342,729 females, and was 4·3 *per mille* in excess of that for the previous year and 5·0 in excess of the average for the previous 5 years. The high death-rate is due to plague, but cholera and respiratory diseases also accounted for more deaths than in the previous year. With these exceptions, however, the rates have been lower than in the previous year and the quinquennium except in the case of dysentery and diarrhoea which have a slightly higher rate than in the quinquennium. The reduction in the fever death-rate is most satisfactory and with the exception of the rate in 1912 is the lowest on record since 1877.

13. The highest provincial death-rate was recorded in the Punjab 36·33, the Central Provinces coming next with 35·91 and the remaining provinces as follows:—Bengal 32·83, Bihar and Orissa 32·2, Assam 30·86, United Provinces 30·04, Burma 27·99, Bombay 26·12, North-West Frontier Province 23·61 and Madras 22·0.

14. The highest death-rate was registered in Rawalpindi 57·4, the others were as follows:—Gujrat 55·8, Amritsar 52·3, Jhelum 48·8, Jullundur

Deaths by districts.—Annual Form No. II.

47·0, Gurdaspur 46·1, Sialkot 46·0, Gujranwala 43·0, Ludhiana 41·4, Attock 40·9, Hoshiarpur 39·3 and Lahore 38·7, all these districts had rates higher than the provincial rate and in all of them their high rates are due to plague. On the other hand in those districts in which there was either no plague or very little low death-rates were recorded, *e.g.*, Dera Ghazi Khan 19·0, Simla 19·7, Muzaffargarh 23·4, Multan 23·8, Montgomery and Gurgaon 24·2, Rohtak 24·8, Lyallpur 25·2, Jhang 25·5 and Mianwali 25·8, in fact the total death-rates in these districts are not as high as the plague rates in Gujrat, Rawalpindi and Jhelum where they were 36·0, 28·6 and 27·4, respectively. In the 6 districts not already mentioned the rates varied between 28·2 in Hissar and 34·5 in Ferozepore. All the districts in the Jullundur Division have a death-rate higher than the mean for the previous 5 years and last year's rate and the same is the case in the Lahore and Rawalpindi divisions with one exception in each case, *i.e.*, in Gujranwala in the Lahore Division and Mianwali in the Rawalpindi Division the rate is less than it was last year. Ambala is the only Division which shows a reduction in both while Multan has only two districts with a higher rate than in the previous year and in the quinquennium, namely, Montgomery and Lyallpur; the increase in these two districts is due partly to plague and cholera in Montgomery and to plague in Lyallpur.

15. The healthiest month in the year was September, the death-rate being only 1·75, this was closely followed by October 1·84, August 1·87, July 2·06

Death-rate by months.—Annual Form No. III.

and November 2·12, the low rates from September to November are due to the practical absence of Malaria in epidemic form. The only months in which a high death-rate was recorded were April 6·04, May 4·81 and March 4·53 the cause being the severe outbreak of plague in these months. Owing to plague in the first half of the year the total deaths practically doubled that of the latter half for the reason that fevers accounted for much fewer deaths than usual. The Malarial season, *i.e.*, September to December, was healthier than any four-month period during the year.

16. Infants under one year of age again accounted for the highest death-rates, 195·24 for males and 188·06 for females, but these rates are much below those for the previous year which

Death-rates according to different diseases under specified age periods.—Annual Form No. IV.

were 230·43 and 223·05. The decrease is due chiefly to a reduction in the death-rate from fevers, respiratory diseases and all other causes, but all heads of mortality except cholera, plague and injuries accounted for a lower death-rate in this age group than in the year preceding. The infant mortality calculated on the number of births during the year works out at 188·02 for males and 189·17 for females as compared with 208·98 and 211·38 in the previous year. Last year's figures were an improvement on those for the previous year and the improvement this year is even more marked. The next highest rates were recorded among those above 60 years of age and were 78·03 in the case of males and 84·47 in that of females, these figures are in excess of those for the previous year and are due principally to an increase in the deaths from plague which was more prevalent in the year under report than in the previous year. Children between one and five years of age accounted for rates of 48·48 and 50·79, those between 50 and 60 for rates of 36·43 and 40·84, those between 40 and 50 for rates of 26·44 and 28·98, in the other age groups it varied between 16·06 the male rate in the group between 20 and 30 and 25·31 the female rate in the group 10 and 15. The total female rate exceeded the male rate under every age group except in the case of infants under one year of age.

17. The districts of Gujranwala and Attock are again offenders in respect of a higher death-rate being recorded among "other classes" than

Deaths by classes.—Annual Form No. V.

the general population, while the districts of Jhang, Sialkot, Muzaffargarh, Dera Ghazi Khan, Gujrat, Montgomery and Amritsar recorded very high death-

rates under this heading ranging from 65·90 in Amritsar to 416·6 in Jhang, the total rate for the province being 51·26.

The rates for the others was as follows :—

Native Christians 40·21, Muhammadans 38·72 and Hindus 33·19.

Practically no improvement has been effected in rectifying the classification of deaths by classes, notwithstanding all efforts made by this department, and it is feared that no change for the better can be expected until the next census when it is hoped that the population for this class will be more accurately recorded.

18. The rural rate which was 36·35 exceeded the urban rate 36·17 under the heads of mortality of cholera, plague and fevers, the excess being greatest under plague amounting to 6·03. Under all the other heads of mortality the urban rate was in excess but to no marked extent except in the case of all other causes and respiratory diseases, the excess amounting to 2·86 and 3·24, respectively.

Amritsar again accounted for the highest death-rate among the three most important towns of the province, the rate being 43·50 as compared with 45·44 last year and 39·26, the average for the previous five years. Multan and Lahore had rates of 33·14 and 33·59, both rates were in excess of their quinquennial average and in the latter above the rate for the previous year also. The increase in Amritsar is due to plague and respiratory diseases, the death-rates from which were 4·78 and 14·44, respectively, compared with a quinquennial average of 1·24 and 9·23. The increase in Lahore and Multan compared with the quinquennial average calls for no remarks except perhaps that in the latter plague accounted for a death-rate of 2·01 against an average of 0·02. The increase in Lahore compared with last year is very slight 0·38, while Multan shows a decrease of 2·03.

Among the smaller towns in the province the lowest rate was recorded in Gojra 2·40, Lyallpur coming next with 9·30 and the following in all of which the rate was below 20·0 *per mille*, Sargodha (14·13), Akalgarh (14·71), Fattahabad (15·79), Dera Ghazi Khan (17·27), Simla (17·59), Khangah Dogran (18·15), Sambrial (18·46), Hafizabad (19·33), Daud (19·82) and Shahkot (19·92). These low rates are due to either the entire absence of plague or to a very small death-rate from it and also partly to the low rate from fevers. The highest rates were recorded in Gohana 68·96, Mitranwali 65·03, Murree 64·60, Sharakpur 61·13, Panipat 54·63, Raekot 54·19, Eminabad 53·75, Nurmahal 53·08, Khushab 51·78, Pakpattan 51·69, Khem-Karan 51·47, Dinga 51·02, Jagraon 50·87, Chawinda 50·69, Jagadhri 50·64, Dasuya 50·04 and Jandiala 50·01. With the exception of Murree, the high death-rate in which is due to fevers (30·12) and dysentery and diarrhoea (17·63), the high rates in all the others are the result of the excessive plague rate recorded in them.

19. There were 620,460 entries checked in the birth registers and 475,230 in the death registers. This shows a decrease compared with both last year and the average for the previous five years. This decrease is due to the fact that the Vaccination Staff were employed to a very large extent on cholera and plague duty during the off season.

The percentage of omissions discovered to number of entries checked worked out to 1·81 and 1·84 for male and female births and 0·89 and 0·95 for deaths for inspections by Divisional Inspector; the rates for Superintendents of Vaccination and Vaccinators are 1·11 and 1·33 for male and female births and 0·45 and 0·52 for deaths. The Revenue Staff found omissions at the rate of 1·07 and 0·89 among births and 0·80 and 0·73 among deaths.

There were 110 Chowkidars fined for neglecting to report births and deaths during the year, the fines amounting to Rs. 65. In municipal towns 151 persons were fined for failing to register births and 91 to register deaths, the total fines amounting to Rs. 202.

20. At railway stations outside municipal limits 119 births and 91 deaths were registered, the corresponding figures for the previous year were 152 and 116, respectively. Of these deaths 2 were due to cholera, 5 to plague, 44 to fevers, 4 to dysentery and diarrhoea, 1 to respiratory diseases, 3 to injuries and 32 to all other causes. No death was registered from small-pox.

21. There were 239 births and 130 deaths among Europeans and Anglo-Indians as against 394 and 206, respectively, in the previous year. The total number of deaths are distributed as follows:—Cholera 4, plague 1, fevers 6, dysentery and diarrhoea 7, respiratory diseases 21, injuries 2 and all other causes 89. No death was registered from small-pox.

22. Among the non-military population of cantonments there were 3,558 births at a rate of 17 *per mille* and 3,352 deaths at a rate of 16 *per mille*, the corresponding figures for the previous year being 3,863 and 3,577 at rates of 18 and 17, respectively. The deaths were classified as follows:—1,516 fevers, 461 respiratory diseases, 122 dysentery and diarrhoea, 114 plague, 42 each cholera and injuries, 1 small-pox and 1,054 all other causes.

Section VI.—Chief Diseases.

23. Cholera.—The total number of deaths from cholera registered in 1915, the great Hardwar Kumb Fair year, amounted to 13,196, the largest annual number since 1903, the year in which the last Kumb Fair was held when 14,688 deaths were recorded. The only other year in which deaths almost equalled this figure was 1908 when 12,297 were reported, the result of a severe outbreak of the disease at Kitas Fair in the Jhelum District. The ratio of mortality from this cause was 0·68 *per mille* of population or double the rate in the previous year and 0·50 more than the quinquennial average. Deaths were reported from all the districts in the province and out of a total of 139 towns and 33,110 villages, no less than 69 towns and 1,678 villages were infected. The largest number of deaths was registered in the districts of Ferozepore and Lahore being 2,890 and 2,657, respectively, Gujrat came next with 1,251, Hissar 785, Amritsar 782, Kangra 775, Karnal 624, Montgomery 587, Rohtak 556, Gujranwala 542, and Ludhiana 502, while in Lyallpur, Shahpur, Rawalpindi, Gurgaon, Ambala, Hoshiarpur, Gurdaspur, Sialkot and Jhelum the number of deaths varied between 316 and 50. In the 8 remaining districts the mortality did not exceed 20.

Except for 3 deaths from cholera registered in the Kangra District during the month of January (a continuation of the outbreak during the latter part of the previous year) the province was free from the disease for practically the first two and a half months of the year. During the latter half of the month of March 10 deaths were registered of which 4 occurred in Kangra, 5 in Lahore and 1 in the Amritsar district.

The first case of cholera occurred at Nurpur in the Kangra District on the 19th March; the inquiry made elicited the fact that the patient had been to Amritsar where cholera was said to be present but on enquiry the Health Officer, Amritsar, reported that he had not heard of the prevalence of the disease there at that time. At Nurpur all preventive measures were adopted and the disease kept well under control. There were only 7 cases with 4 deaths.

On the 23rd March an imported case of cholera occurred at Jawalamukhi Naurata Fair, also in the Kangra District. The patient was a pilgrim from Gharwal District in the United Provinces and developed symptoms of the disease 36 hours after his arrival at Jawalamukhi; another case also occurred in the same locality on 28th. The patients were isolated and every possible precaution taken, but this fair has been held responsible for the partial dissemination of the disease and along with infections imported from Kumb Fair, Hardwar, led to the epidemic which continued in April, May and June.

It was towards the end of March that the disease broke out in epidemic form amongst the people returning from the Ghariala Fair in the Kasur Tahsil from where the infection was spread gradually to other parts of the district and led to a severe epidemic. The source of infection at Ghariala could not be definitely traced. The first (fatal) case, in the Amritsar District, occurred on the 30th March in the Amritsar city, in the person of one who had returned from the Ghariala Fair.

On receipt of telegraphic intimation from the Sanitary Commissioner, United Provinces, that cholera was present at Hardwar and pilgrims were dispersing, Civil Surgeons and Health Officers were warned to take necessary precautions against the disease, but notwithstanding this precaution cholera broke out at once in 23 districts and caused 877 deaths during April, the victims being in most places those who had just returned from the great Hardwar Kumb Fair. It may be noted here that no less than 2,017 cases with 1,085 deaths were due to infection introduced from Hardwar from the middle of April to the 3rd week of May. In May the number of deaths amounted to 4,390 when the disease assumed a virulent form; from the month of June the disease declined and the number of deaths fell to 3,607, in July and August

there was a still further reduction to 2,145 and 1,796 while in September and October the number fell to 331 and 29, respectively, the number of infected districts decreasing accordingly. In November, Ferozepore and Gurdaspur were the only districts in which deaths occurred, only 1 in the former and 7 in the latter. No death was registered during the month of December. The district of Ferozepore headed the list with 4,407 cases and 2,890 deaths. From the cholera enquiry reports it was ascertained that no less than 61 persons were infected at Hardwar in the Kumb Fair and were the chief agents of importing infection into the district. The Civil Surgeon and the medical subordinates did all that was possible to stamp out the disease and to mitigate its effects. Eighty infected villages were frequently visited by the Civil Surgeon who personally conducted operations. The Additional Deputy Sanitary Commissioner, Punjab, was also in this district from 8th to 28th June supervising anti-cholera operations in the infected villages of Moga and Zira Tahsils which were the worst affected. The Lahore District came next with 2,657 deaths. The Ghariala Fair in the Kasur Tahsil was considered to be a diffusion centre as from the cholera enquiry reports the source of infection was traced from this fair to at least 36 villages, many of which helped again in the further spread of the disease. It is a noteworthy fact that with the exception of the Kangra District the disease was not prevalent in any part of the province at that time and as far as could be ascertained it was not imported from the Kangra District or from outside the province, it may therefore be concluded that the real origin of the disease was from "Chronic carriers." It would also be interesting to note that the first few cases noticed in Algan, which was the first village infected from Ghariala on 29th March, were very similar to severe ptomaine poisoning, only those who attended the Fair being attacked. The course of the epidemic was much protracted, lasting from 29th March to nearly the end of September. The largest number of deaths in this district occurred in May and June (1,018 and 673, respectively) the reason assigned was that a large number of marriages took place during these months, the Jats being comparatively free from work in the fields. In Lahore Municipality 86 deaths occurred, the first four cases being among those who had just returned from Hardwar between the 16th and 25th April with the exception of a sporadic case which occurred on April 7th. Besides these 10 cases with 7 deaths occurred in a part of the city known as Wachhowali on the 2nd May and the Health Officer reported that although he could not say with certainty yet from the history given to him, it seemed as if infection had been brought from Hardwar. Prompt measures for disinfection were adopted in all cases reported, by the Health Officer, Lahore, and the spread of the disease was kept well under control. About 430 wells were permanganated in the City. Gujrat is the third district in which cholera has been bad this year. The disease was first perceived in Pindi-Hasna and Chilianwala villages in the Gujrat and Dinga Police Stations on 14th May. After that 3 towns and 210 villages were infected from one another and from the adjacent districts. At Pindi-Hasna the cause of the disease was reported to be due to the eating of the flesh of a diseased ox by some 30 persons, all of whom were seized with vomiting and purging and that then the disease spread through contaminated food and drink in the village. At Chilianwala it was reported that the people had evacuated their houses on account of plague and were living at different wells outside in temporary constructed huts. The two camps in which the first persons were attacked were side by side. They drank water from a well situated to the east of the village on the roadside and in the Muhammadan graveyards of the Sayyads which had been closed for the last four months. The water contained a lot of decomposed matter which lent it a whitish colour and an offensive smell. Next day after drinking the water 4 cases of vomiting and purging occurred in both these camps. Two of them ended fatally, while the others recovered. When the people assembled in the same graveyard to bury the first Muhammadan case and offer prayers several of them drank water from the same well and all were seized with vomiting and purging in the evening. The disease went on slowly in June, but with the approach of the Ramzan (15th July) it began to increase, but subsided again after the "Id" festival (15th August). There can be no doubt that the

Ramzan is a great predisposing cause and Gujrat being a district which is mostly populated by Muhammadans suffered considerably. In the Kunjah town all those attacked with one exception were Muhammadans, they fell sick mostly during the fasting month.

There was an outbreak of epidemic diarrhoea in Murree during the month of Ramzan. The Civil Surgeon and the Additional Deputy Sanitary Commissioner, Punjab, who were sent to investigate the disease, examined excreta of 4 cases, with the result that no cholera germs were found in the stools.

The chief cause of the severe epidemic of cholera this year, except in Lahore and Gujrat districts which were badly infected, was the great Kumb Fair at Hardwar, though later on disseminating centres were formed in the infected districts. Every possible effort was made to check the spread of the disease and the Additional Deputy Sanitary Commissioner, Punjab, inspected the severely infected districts, personally supervising the disinfection of all sources of water supplies and other anti-cholera precautions. While not on cholera duty all the returns were checked by him and in addition to pointing out irregularities to the Civil Surgeons concerned, he also instructed them as to further precautions to be observed. It was a drawback that the prevalence of the disease was not reported to the authorities in several cases till the disease had been firmly established, it is hoped that in future, now that the Lambardars and Chaukidars have been made definitely responsible for the prompt report of such outbreaks, there will be no more trouble of this nature and if so, that the district authorities will take severe notice of any delinquency in future.

In April at several principal railway stations segregation sheds were erected and passengers found sick in trains were removed and treated in them. As cholera was also prevalent in Kashmir an inspection post was established at Kohala to prevent the introduction of the disease from that side.

The Civil Surgeon of Amritsar reported that valuable services were rendered in connection with cholera by Honorary Sanitary Inspectors, Bhai Sahib Singh, son of Sirdar Budh Singh, Subedar-Major, and Lala Jaishi Ram, grandson of late Lala Lal Chand Rai Bahadur, Honorary Magistrate and Sirpanch of Amritsar city. The public spirit shown by the gentlemen was most praiseworthy. They distributed medicines gratuitously and made frequent visits in order to get the drains and lanes situated within their circle thoroughly cleaned; besides they rendered much assistance in the disinfection of wells and houses in the city. The Civil Surgeon considered that they deserved high commendations and exceptional notice for these services.

The Civil Surgeon, Gurgaon, reported that the services of Rao Bahadur Balbir Singh, Honorary Magistrate of Rewari, were also worthy of special recognition. Lalas Sri Ram and Maya Das, Civil Surgeons of Ludhiana and Gurdaspur, Chawdhri Mela Ram and Sayed Nasir Hussain, officiating Civil Surgeons of Kangra and Ferozepore districts, did good work in controlling the disease, and Assistant Surgeons, Pandit Chandar Shikar, Lala Piarey Lal Tandan and Lala Jagat Ram Kochar also rendered valuable services. The following Sub-Assistant Surgeons Abdul Rahim, Bhawani Sahai, Lala Diwan Chand of Zira, Munshi Jan Mohammad, Lala Fakir Chand, and Pandit Amin Chand of Dehlon are also worthy of mention for their valuable services in this connection.

24. **Small-pox.**—There were as few as 1,694 deaths in all recorded under the head of small-pox yielding a rate of 0·09 *per mille* of population. The

Annual Form No. VIII.

number of deaths among children under one year of age was 379 as against 765 in the previous year whilst the number for over one and under 10 years of age was 911 as against 1,569. It is satisfactory to note that the death rate is 0·06 less than the figures for the previous year when the ratio of mortality from this disease was the lowest recorded since the introduction of the system of registration of deaths. It is also 0·73 below that of the quinquennial average. The decrease is no doubt due to the fact that there were very few persons susceptible to the disease for the reasons stated in paragraph 24 of the report for the year 1914.

During the month of January 64 deaths were registered and in February the number of deaths fell to 59 which is the lowest number of deaths ever recorded in any one month since 1867. In March and April, however, the number of deaths rose to 101 and 131, respectively, and to 306 in the month of May in which it was the highest. From this month onwards, however, the disease declined and the number of deaths fell to 282 in June, 244 in July, 144 in August, 105 in September and 96 in October; the months of November and December accounted for only 77 and 85 deaths, respectively, and with the exception of the month of December of the previous year, when there were only 76 deaths recorded, these figures are the lowest on record for this season since the commencement of the registration of deaths in the province.

The districts of Ferozepore and Lahore recorded the highest death-rate from small-pox as was the case last year being 0.42 and 0.33, respectively, per 1,000 of population, but these rates were lower than the figures for the previous year and that for the average for the previous 5 years. Ludhiana comes next with a rate of 0.25 compared with 0.34 in the year preceding. In Amritsar, Hissar, Lyallpur, Multan and Montgomery the rates varied between 0.19 and 0.09.

It is very gratifying to observe that the districts of Simla, Kangra, Jhelum, Gujranwala, Rawalpindi, Attock, Dera Ghazi Khan, Jhang, Gujrat, Mianwali and Sialkot were practically free from the disease as no death was registered in the Simla district and in the others the number of deaths was between 1 and 8 only. In the 9 remaining districts of the province the death rate was also below the provincial rate.

The average death-rate from small-pox in towns was 0.12 *per mille* or 0.4 greater than in rural circles while for towns in which the compulsory Vaccination Act is in force it was 0.10 as compared with 0.15 for those in which the provisions of the Act have not been extended. Vaccination is better attended to in towns where it is compulsory, but a stricter application of the Act would effect greater improvement. Among the largest towns of the province, Multan headed the list with a death-rate from small-pox of 0.38, Amritsar being next with 0.21, while in Lahore the rate was as low as 0.03. In the smaller towns the highest rates were registered in Ballabgarh, Khudian and Batala and were respectively 1.73, 1.34 and 1.21, and it may be noted that the provisions of the Act have not been extended to any of them. In 36 towns the death-rate varied between 0.03 in Gujranwala and 0.93 in Phillaur and in the remaining 97 towns there was not a single death from small-pox.

The rate of mortality from small-pox was, as usual, greatest, among infants under one year of age being 0.49 *per mille* in the case of males and 0.42 in that of females as compared with 1.00 and 0.84, respectively, in the previous year. Among children from one to five years of age the rate fell to 0.31 and 0.27, while in the next age period of 5.—10 years it was further reduced to 0.13 and 0.12; over 10 years of age the death-rate never exceeded 0.03 *per mille* in either sex and gradually fell with increasing age. The female death-rate was greater than the male rate in age periods from 10—50 years due to the reason given in last year's report, namely, the reluctance with which females are presented for re-vaccination.

25. Plague.—The following plague report has been furnished by the Inspector-General of Civil Hospitals, Punjab.

Mortality.—There were 244,104 deaths from Plague in the year under report in the Punjab. This is the worst epidemic since that of 1907, though

the years 1910 and 1911 were not by any means light years as will be seen from the following figures :—

1907	...	...	...	...	666,501
1908	...	...	...	...	40,106
1909	...	...	...	...	45,064
1910	...	...	...	...	169,867
1911	...	...	...	...	198,669
1912	...	...	...	...	35,123
1913	...	...	...	...	20,231
1914	...	...	...	...	73,627
1915	...	...	...	...	244,104

The severity of the epidemic was mainly due to the large legacy of infected areas left over from the latter half of the year 1914.

Area of distribution.—The Jullundur, Lahore and Rawalpindi Divisions were attacked very severely, the Multan Division escaped comparatively lightly. In the Ambala Division the districts of Gurgaon and Rohtak which are annually rather badly affected were not so this year, but the Karnal and Ambala districts suffered more heavily than usual. Two districts, Mianwali and Dera Ghazi Khan, practically escaped. Out of the 28 districts in the province, altogether 12 were severely visited, *viz.*, Hoshiarpur, Jullundur, Gurdaspur, Ludhiana, Amritsar, Lahore, Gujranwala, Gujrat, Jhelum, Shahpur, Rawalpindi and Attock.

Seasonal variation.—Starting with a death roll in January twice as heavy as that of the corresponding month of 1911, the worst year within the preceding seven years, the mortality went up by leaps and bounds until it reached its highest in April, when the humidity and the temperature factors were most favourable to the spread of the disease; and it began to drop in May, practically disappearing in June, and during the last 6 months of the year owing to the abnormally dry weather and unusually high temperature a number of districts remained absolutely free. A comparison of the figures for the first and the last 6 months, January to June 1915, 243,299, July to December 1915, 805, together with the mortality for the last 6 months of 1914, which was 13,833, shows what has been the effect of the legacy transmitted to this year, while at the same time it enabled us to foretell more or less correctly what sort of a year 1916 would be.

Measures.—(1) *Education.*—In addition to instruction afforded to the people on the causes, prevention and treatment of Plague, large numbers of Lady O'Dwyer's Appeal to the Women of the Punjab were very widely distributed.

(2) *Disinfection*—

- (a) By Solar Heat. People seem to understand the value of this quite well, and they would quite willingly practise it if only they could rid themselves of their accustomed inertia.
- (b) Dessication by means of dried cowdung cakes and Nim leaves burned on the floor is in use, and people like it.

(3) *Rat Destruction.*—Has been carried out throughout the year. In the hot weather particularly the worst later infected villages were repeatedly visited, and in only a very few instances has there been any outbreak in them; where there has been any it has been of a very mild type. This rat-destruction campaign has been carried out by means of—

- (i) trapping.
- (ii) baiting.
- (iii) smoking with Nim Battis.
- (iv) smoking with stoves.

The general idea has been to reduce the rat population in —

- (a) places which were infected late in the preceding year.
- (b) places where the epidemic generally appears early and annually.
- (c) places which reported unusual rat mortality or human cases at any time.

The good effects of these operations were well illustrated by the work of the municipalities of Rawalpindi and Lahore. In the former case operations were commenced very late, but the result was satisfactory in that the disease was kept well in check. In Lahore over 2 lakhs of rats were killed.

Owing to Chlorate of Potassium for Nim Battis not being obtainable in the market, smoking with Bhusa and sulphur was carried out by means of stoves with a bellows attachment with a very good result.

(4) *Cresol Fumigation*.—This was done fairly extensively and its utility seemingly succeeded in aborting out breaks or in preventing their getting out of control.

(5) *Evacuation*.—This measure the people know to be effectual, but it is difficult to get them to practise it so as to be of real use in cutting short an outbreak. During active infection people will fly away in panic, evacuating houses and even whole Mohallas, but with the exception of rare instances where all possible help has been given by the District authorities, they will not evacuate whole villages. The unintelligent employment of this measure together with the little use made of their power to refuse access to people from infected places are largely responsible for the spread of the disease from one place to another.

(6) *Inoculation*.—Although it must be admitted that there are certain districts where this measure is becoming to be appreciated at its proper value there is no doubt that there is little willingness shewn in accepting it except where the danger of contracting the disease is imminent. Consequently we have been practising limited inoculation, i.e., inoculating mainly of persons actually exposed to infection. This has been found to work very satisfactorily and we have this year done as many as 161,313 inoculations in British districts, with another in the 4,844 in the Native States, as compared with 49,468 in 1914, and 26,419 in 1913, and 51,570 in 1912.

Reporting.—Though there have been instances here and there of villages trying to hide an outbreak and though there have been undoubtedly some tahsils which have shown a disinclination to give early intimation of fresh outbreaks, yet on the whole, the reporting has been more satisfactory.

Attitude of the People.—On the whole the attitude of the people generally to plague measures has, it is thought, improved. The medical staff has been frequently admonished on the necessity of remaining in contact with villages and providing medical relief to such as require it. There is no doubt there is too great a tendency for Assistant Plague Medical Officers to look upon themselves as inspecting officers and to pay only flying visits to infected areas.

General Relief.—47,849 persons were treated during the year by the special staff in the way of medical relief, as compared with 55,915 in 1914, 84,530 in 1913 and 36,940 in 1912. Considering that the staff had a very severe epidemic to control this may be considered satisfactory.

Protection of Simla.—The usual arrangements for the protection of Simla were carried out throughout the year.

Special Staff.—There was an average of thirty Assistant Surgeons and seven Sub-Assistant Surgeons on Plague work. On account of the reversion to the Military Department of all I.M.S. officers on Plague duty it was found necessary to have an Assistant to the Chief Plague Medical Officer, and Dr. T. Sinha was selected for the appointment, and he took up his duties from the beginning of September. About the end of September, Lieutenant-Colonel D. T. Lane, I.M.S., the Chief Plague Medical Officer, reverted to his substantive appointment and since then I have carried on the duties of Chief Plague Medical Officer.

Sanction was obtained from the Local Government to place the district Vaccinators on Plague duty during the hot weather to help in rat extermination under the supervision of the Special Staff.

Auxiliary Staff.—All Assistant Surgeons and Sub-Assistant Surgeons in charge of dispensaries are now required to attend to outbreaks in towns and villages pending the arrival of the special staff.

Paid lay Agents.—Some district boards and municipalities employed paid agents during active infection to carry on ratting operations and to help the special staff with satisfactory results, and many people rendered most helpful voluntary assistance which, as far as possible, has been acknowledged.

26. **Fevers.**—Fevers this year accounted for 284,784 deaths at a rate of 14·73 *per mille* as against 17·87 last year and 16·31, the average for the previous five years. This rate is lower than that in the previous 2 years and only slightly higher than that recorded in 1912.

Annual Form No. IX.

As in the previous year, the fever death rates of fourteen districts were lower and of fourteen higher than the provincial rate of 14·73. This rate was exceeded in the districts of Muzaffargarh and Mianwali where it was 20·34 and 20·10, respectively, Amritsar 18·18, Attock 18·13, Rawalpindi 17·95, Kangra 17·41, Multan 17·31, Hoshiarpur, 16·93, Gujranwala 16·89, Dera Ghazi Khan 16·19, Lahore 15·95, Montgomery 15·77, Karnal 15·14 and Hissar 14·85. But all these districts except Lahore, Amritsar, Mianwali and Montgomery have lower rates than their quinquennial average.

It is gratifying to note that the fever death rate showed a decrease in all the districts in the Punjab as compared with that of the previous year except Kangra, Ferozepore and Montgomery which showed a slight increase, which calls for no remark. Compared with their quinquennial average all the districts show a decrease except Ferozepore, Lahore, Amritsar, Mianwali, Montgomery and Lyallpur.

The lowest death rates were recorded in the districts of Simla, Gurgaon, Gujrat and Shahpur where they were 7·69, 9·49, 10·76 and 10·95, respectively.

As usual the rate for females was higher than that for males.

The fever death rate for towns and rural circles was 13·32 and 14·87 as against 15·64 and 18·80, respectively, in the previous year. The three largest towns had the following fever death rates, Lahore 18·59, Amritsar 15·59 and Multan 15·38. The first named town recorded a higher and the other two a lower rate than in the previous year. In the minor towns rates as high as 30·12 were recorded in Murree, 27·77 in Khangarh, 26·83 in Karor, 24·13 in Bhakkar, 23·37 in Shujabad, 22·63 in Dina Nagar, and 22·34 in Kamalia and Alipur, while the lowest rates were recorded in Rewari 0·40, Gojra 0·74, Dalhousie 4·26, Kalaswala 4·46, Sargodha 4·75, Raekot 4·79 and Dharmkot 4·95.

Fevers in municipal towns and rural circles. Annual Form No. VI A. & B. and specified age periods, A. F. No. VI.

Although the fever death rate recorded in Khangarh and Kamalia towns during the year under report is high, yet these rates are lower than their respective rates for the previous year. The highest fever death rate 30·12 was recorded in Murree as against 9·55 in the previous year. No satisfactory explanation has been furnished for this high rate, but the Civil Surgeon reports that on enquiry it appears there was an outbreak of enteric fever and that some of the deaths may be due to this outbreak. It is probable, however, that some deaths due to diarrhoea during the epidemic were misclassified and recorded under the head of fevers.

As usual infants under one year of age and old people above sixty suffered most from fever during the year, the death rates being 81·59 for males and 81·64 for females in the former and 42·80 and 44·60 in the latter groups. Next to these come those between one and five, the rates being 22·00 and 23·67, all these rates were lower than those recorded in the previous year.

The rates for the others varied from 5·09 to 10·01. The largest number of deaths from fevers among infants under one year of age were registered in the Kangra, Amritsar, Hissar and Lyallpur districts.

There was an outbreak of typhoid fever in village Uddafattah in the Sialkot District where 19 cases and 5 deaths occurred between the last week of May and the 1st August. On enquiry it was found that the first case was a Christian boy aged 9 years who had not been away from the village and died on the 5th June. Other cases followed rapidly chiefly among children or young persons between the ages of 4 and 14 except in two cases, men of 21 and 25 years of age. The cause of the infection could not be traced. The Civil Surgeon, Sialkot, reported that an attempt was made to take blood in capsules for examination but this was not permitted by the relatives of the patients.

27. Dysentery and Diarrhoea.—There was a total number of

Annual Form No. X.

12,558 deaths from this cause at a rate of 0·65 *per mille*, this is 0·04 less than in the previous year and 0·08 in excess of the average for the quinquennial period. Rawalpindi again accounts for the highest death rate 3·91, and Hoshiarpur the lowest 0·03, and with the exception of Montgomery and Attock where the rates were 0·06 and 0·07, the rates in the others varied but slightly, *i.e.*, from 0·14 in Muzaffargarh to 1·62 in Kangra.

The urban and rural rates were 1·91 and 0·52, respectively, the corresponding rates for the previous year being 2·11 and 0·55.

28. Respiratory Diseases.—Diseases of the respiratory organs

Annual Form No. XI.

accounted for 47,193 deaths at a rate of 2·44 *per mille*. This rate which is in excess of the average for the previous 5 years (2·26), and last year (2·42), is the highest on record since 1908, when it was 3·22. The highest rate as usual was recorded in Gurdaspur (10·22) and the lowest in Multan 0·002, fairly high rates were recorded in Ambala 5·33, Amritsar 4·56, Jullundur 4·45 and Sialkot 4·18, while very low rates were recorded in the Multan Division. Jhang District being the only one in which the death rate was 1·29.

29. Injuries.—Of the 6,893 deaths recorded under the head injuries

Annual Form No. II.

which caused a death rate of 0·36, 253 (102 males and 151 females) were due to suicide, 463 (351 males and 112 females) to wounds, 4,673 (2,681 males and 1,992 females) to accidents, 1,134 to snake bite, 272 to injuries inflicted by wild beasts and 98 to rabies.

30. All other causes.—114,266 deaths were recorded under the

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head "All Other Causes" at a rate 5·91 *per mille*, the corresponding figures for the previous year being 131,688 at a rate of 6·81, and the rate for the quinquennium 6·37. The highest death rate under this head was recorded in Gurgaon 10·0, and this was closely followed by 9·9 in Ferozepore, 9·6 in Ludhiana, and 9·0 in Karnal. The lowest rate was as usual in Gurdaspur 0·9, the following districts also returning low rates, Dera Ghazi Khan 1·4, Muzaffargarh 2·0, Rawalpindi 3·7, Attock 3·8 and Gujrat 3·9, in the others it varied between 4·1 in Mianwali and 8·3 in Rohtak.

31. Rabies.—There were 5,050 patients during the year, who underwent anti-rabic treatment at the Pasteur Institute of India at Kasauli, as compared with 4,589 in the previous year. Out of this number 322 were Europeans and 4,728 Indians. There were 60 deaths and 30 failures all among Indians. The number of cases who were advised that treatment was not necessary, was 441 as against 297 in the previous year.

Section IX.—Sanitary Work.

32. The Report on Sanitary Works during 1915 furnished by the Sanitary Engineer to Government, Punjab, is contained in appendix B to this report.

33. Only three village sanitary note-books were supplied to villages in the Multan District and 50 books to the Civil Surgeon, Montgomery, during the year 1915.

34. The sum of Rs. 500, which was provided in the budget of the Gurgaon District for rewards on account of sanitary improvement, was not utilized as no village was reported to be deserving of a reward.

35. The number of wells cleaned and parapets constructed during the year fell from 13,120 to 9,537, and from 1,700 to 1,489, respectively. The amount spent for the purpose was Rs. 59,323 as against Rs. 75,132 last year.

In the Ferozepore District 148 wells were cleaned by private persons at their own expense, while in the Gohana Tahsil (Rohtak District) certain private individuals spent a sum of Rs. 996 in this direction.

Three springs of water were improved by the district board, Mianwali, by providing iron pipes; estimates for Rs. 2,378 for the construction of a water reservoir and filter bed at Musakhel, and improvements to the spring water between Trutta and Sukesar are also in hand.

36. An income of Rs. 1,28,286 was derived from the sale of street sweepings in municipal towns during the year as against Rs. 1,40,520 last year. The largest sums were realized in Lahore, Amritsar and Sialkot.

37. There were 1,842.60 acres of land under sewage irrigation in the principal towns and Rs. 34,333 were realized for its use during the year showing an increase of 94.22 acres in land thus irrigated and Rs. 845 in the amount realized.

38. Very few attempts have been made to improve village sanitation. It is extremely difficult to get the villagers to change their customs or habits, it would therefore seem almost hopeless to do very much to help them until some wish for improvement is shown by the people themselves. Instruction in schools, experience of the benefits of good water, etc., in their visits to towns, fairs, etc., where good sanitary arrangements have been made, will, it is hoped, at least tend to remove prejudices against steps taken to assist them and lead in time to the growth of a genuine desire to help themselves.

In the course of my inspections nothing has struck me more than the need there is for a better appreciation of the benefits of good sanitation amongst the municipal authorities of our towns, even where under their own direction a system of drainage has been introduced, from neglect has led to its becoming a source of danger rather than a benefit to the population committed to their care. In the Hissar and Amritsar districts efforts are being made to teach the people the elementary principles of sanitation through the agency of the plague establishment when they are on itinerating duties.

It is gratifying to note that a punchayat of 7 men is being appointed to supervise sanitation in villages in the Gurgaon District.

39. A list of works of public utility constructed during the year 1914-15 by private individuals at their own expense is given below :—

AMBALA DIVISION.—*Ambala District*.—A pucca well on the road to Ambala at a cost of Rs. 600 by Buhloo Mal, son of Parabh Dyal, Bania, of Daugdehri. A ghât of a tank at a cost of Rs. 1,000 by Mussammat Partapi, widow of Kalyan Singh, Jat of Kumbara. A well

at a cost of Rs. 900 by Mussammat Karmen, widow of Hira Singh, Jat of Mullanpur. A pucca well at Mankheri, tahsil Rupar, at a cost of Rs. 600 by Mussammat Partapi, widow of Kirpa, carpenter, of Bharaoli Tahsil, Sirhind, in Patiala State.

Hissar District.—A pucca well at Satrod Kalan at a cost of Rs. 4,000 by Badri, son of Kanhi Ram, Mahajan of Satrod Kalan. A Dharamsala with a well on Hansi-Jind Road at a cost of Rs. 3,500 by Nathu Ram, son of Jai Ram, of village Narnand. A pucca well with a Dharamsala at village Dhanana at a cost of Rs. 3,000 by Radha Kishen, adopted son of Lekh Ram, of village Dhanana. A pucca well with platform near village Haluwas Mazra Deosar on Bhiwani-Kairo Road at a cost of Rs. 3,500 by Jankhe Ram, Mahajan, of Bhiwani Halu Janpal. A pucca well with ghât, etc., in village Deosar at a cost of Rs. 3,900 by Lala Het Ram, son of Lala Kalu Ram, Mahajan of village Deosar. A pucca well in village Kasumbi on Bhiwani-Kairoo Road at a cost of Rs. 3,000 by Jali Ram, son of Muthra Dass, Mahajan, of Bhiwani Janpal.

Rohtak District.—A Dharamsala with a well at Bahadurgarh at a cost of Rs. 5,000 by Lala Ajudhia Parshad, son of Kishori Lal, Mahajan, of Bahadurgarh. A pucca well at Jharli at a cost of Rs. 3,500 by Chaudhri Dhani Ram, Zaildar, Jharli. A pucca well on Rohtak Bohar road near Bohar at a cost of Rs. 2,000 by the wife of Indraj, son of Teja, Jat, of Bohar. A pucca well at Kiloī at a cost of Rs. 2,000 by Jiwan Ram, son of Fateh Chand, Mahajan, Lath. A pucca well at Bidhal on the way to Joli at a cost of Rs. 900 by Amar Singh, son of Harnamond, Pujare, Mahajan, of Bidhal. A pucca well at Bhainswal Kalan on the way to Anwali at a cost of Rs. 1,200 by Baldewa, son of Pokhar, Mahajan, Bhainswal Kalan. A pucca well at Dhanana, Alladadpur, on the way to Chiri and Nandal, at a cost of Rs. 1,000 by Sukh Lal, Brimehari of Dhanana. A pucca well at Khandrai at a cost of Rs. 450 by Hari Singh, Rati Ram and Nathoo, Jats, of Khandrai. A pucca well within the compound of Veterinary dispensary, Gohana, at a cost of Rs. 650 by Jiwan Ram, son of Fateh Chand, Mahajan of Lath. A pucca well on tank at Bhaini Chandarpal, at a cost of Rs. 1,000 by Nanak Nath, Jogi of Bhaini Chandarpal. A pucca well on the tank at Seman at a cost of Rs. 4,000 by Mat Ram, Mahajan, of Seman.

Gurgaon District.—A Dharamsala, well and garden on the Bahadurgarh-Majhaoli Road at a cost of Rs. 600, Rs. 400 and Rs. 500, respectively, by Baldev, son of Gutti, Mahajan of Tigaon. A pucca well, Dharamsala and Piao on Nuh-Ujina Road, at a cost of Rs. 1,800 by Tota and Nanga, son of Mukh Ram, Mahajan of Nuh. A well and Dalan on Jhajjar road at a cost of Rs. 1,200 by Bansi, son of Mansa, Jat, of Khandeola. A pucca Dharamsala, Piao and well at Badha at a cost of Rs. 90, Rs. 35 and Rs. 700, respectively, by Tej Singh and Bahala, son of Ram Parshad and Ram Saran, son of Harpal, Jat, of Badha.

Karnal District.—A pucca well at Sheikhpura for drinking purposes at a cost of Rs. 300 by Chaudhri Raja Ram, son of Prem Sukh, Jat, of Sheikhpura. A pucca bathing ghât at Tiraon built from contributions at a cost of Rs. 976 by Pandit Ajudhia Parshad and Baij Nath, sons of Mangal Sen, Brahmin of Tiraon. A pucca well at Naraina village for drinking purposes at a cost of Rs. 400 by Mussammat Bhuro, widow of Bhartu, Gujar, of Naraina. A pucca well at Bhalang for drinking purposes at a cost of Rs. 1,050 by Chaudhri Sukh Ram, son of Sahej Ram, Jat, of Bhalang.

LAHORE DIVISION.—*Lahore District.*—A drinking well and a shed for travellers on the Lahore-Multan Road near village Kakki Zai, tahsil Lahore, at a cost of Rs. 1,000 by Lala Har Bhaj Ram of Lahore. A drinking well on circular road near Zailghar, Chunian, at a cost of Rs. 600 by Mussammat Matab Kaur, widow of Magi Ram of Chunian. A drinking well in the town at a cost of Rs. 625 by Pandit Ram Nath of Chunian.

Gujranwala District.—The sinking of a well and constructing a hut in the compound of the District Court, Gujranwala, for the convenience of the public and litigants, at a cost of Rs. 1,404 by Lala Mohan Lal, Arora, caste Ghamir, Municipal Commissioner, Gujranwala.

RAWALPINDI DIVISION.—*Mianwali District.*—A tobha (Kacha tank) at a cost of Rs. 120 by Mussammat Khatun of Shadia (Mianwali). A well at a cost of Rs. 320 by Mussammat Khando of Shadia. A tobha at a cost of Rs. 275 by Jhangi Ram of Watta Khel (Mianwali).

Section X.

40. Colonel C. J. Bamber, I.M.S., held additional charge of the post of Sanitary Commissioner, Punjab, from the commencement of the year till the forenoon of the 12th July 1915, when I relieved him and held additional charge till the end of the year.

Administration.

The post of Deputy Sanitary Commissioner was held throughout the year by Major W. C. H. Forster, I.M.S., in addition to his duties of Professor of Pathology at the Lahore Medical College.

Dr. Khawaja Abdul Rahman, M.B., Ch. B. (Edin.), D. P. H. (London), held charge of the appointment of Additional Deputy Sanitary Commissioner throughout the year. He was confirmed in his appointment on 20th November 1915.

41. In January Colonel Bamber inspected Montgomery, Multan, Muzaffargarh and Dera Ghazi Khan, and in February Lahore, Lyallpur and Gojra, in April Simla and Jullundur, and afterwards conducted the examination of the Sanitary Inspectors' class. In May he inspected Amritsar and accompanied the Local Government to Simla. No inspections were done in the summer, but I inspected Simla and Gurgaon in October, and in the following month Ferozepore, Rohtak and Ambala. In company with the Sanitary Engineer, I visited the Nankana Sahib fair ground on the 20th November and advised the Deputy Commissioner in regard to the preparation of the rough project for a model fair ground in connection with the drainage and water works there. A combined note by the Sanitary Engineer and myself was also prepared and sent to the Deputy Commissioner for necessary action.

Inspection work of Sanitary Commissioner.

42. Major Forster was not able to devote as much time as he desired to the proper sanitary surveys of towns, as he was almost entirely occupied at the Medical College, Lahore, and in the supervision of the working of the Punjab Vaccine Institute. Nevertheless during the college recess (from the middle of June to the end of September) he toured, chiefly for the purpose of inspecting Vaccination and Birth and Death Registration, in 88 towns and villages of the following localities:—

Inspection work of Deputy Sanitary Commissioner, Punjab.

British Districts—(1) Simla, (2) Ambala.

Native States— (1) Keonthal,
(2) Theog,
(3) Kumharsain,
(4) Rampur Bashahr,
(5) Jubbal,
(6) Baghat, and
(7) Ghund.

During these tours, as far as possible, every opportunity was taken to bring home to the people generally, and the officials particularly the advantages to be derived from the observance of general sanitary measures.

43. In the beginning of January Dr. K. A. Rahman inspected some of the local schools at Lahore, and examined 3,957 children in connection with the immunity produced by glycerinated calf lymph. On the 14th of that month he started his first tour of Sanitary and Vaccination inspections, returning to head-quarters on the 28th February. During these seven weeks he visited and reported on the sanitary condition of the towns of Hafizabad, Ramnagar, Akalgarh, Gojra, Chak Jhumra, Khangarh, Leiah, Karor and Bhakkar, at the same time inspecting vaccination and registration of births and deaths in the above-mentioned towns and 304 villages of

Inspection work of the Additional Deputy Sanitary Commissioner, Punjab.

the Gujranwala, Lyallpur, Muzaffargarh and Mianwali districts. In March he was deputed to supervise the Medical and Sanitary arrangements at the Pehowa fair in the Karnal District. On the termination of the fair he visited the Jullundur District and reported on the sanitary condition of the towns of Nakodar, Nurmahal, Rahon and Banga, inspecting vaccination and registration of births and deaths in those towns, and also of Phillaur and Nawashahr and 104 villages in the district.

In April he supervised the Medical and Sanitary arrangements made at Choa Saidan Shah and Katas fairs in the Jhelum District, after which he made a sanitary and vaccination inspection of the town of Pind Dadan Khan. On his return to head-quarters he was ordered to investigate an outbreak of cholera in the Kasur Tahsil of the Lahore District, which appeared there in epidemic form. In May he was detailed to supervise cholera operations in the towns of Panipat, Dharamsala, and in several villages of the Kangra and Palampur tahsils of the Kangra District. Early in the month of June he inspected the Punjab Vaccine Depôt at Murree, after which he remained on cholera duty in the Ferozepore District till the end of that month.

By the middle of July he was in Simla, where he worked in my office, dealing with the cholera enquiry reports and returns of the province besides his own office work.

On August 13th, he left Simla for Murree where diarrhoea was reported in an epidemic form. From there he went to Gujrat, Shahpur and Lahore districts, investigating the outbreaks of cholera in the infected parts of those districts, returning from there to head-quarters on the 23rd September. In October he visited and reported on the sanitary condition of the towns of Sonapat, Bahadurgarh and Gohana in the Rohtak District. In November he supervised the Medical and Sanitary arrangements of the Nankana Sahib and Baba Farid fairs in the Gujranwala and Montgomery districts, respectively, and in December he made a sanitary inspection of the towns of Panipat and Kaithal, at the same time inspecting vaccination and registration of births and deaths of these towns and 46 villages in the Karnal District.

44. Civil Surgeons made one hundred and eighty-four inspections of towns and 2,238 of smaller towns and villages during the year as against 158 of towns and 2,743 of villages in 1914. The number of towns inspected by Assistant Surgeons remained the same as in the previous year, viz., 43, and of villages 1,191 as compared with 1,116 in the previous year.

45. Owing to scanty rain during the year under report there was no undue prevalence of malaria in the province, notwithstanding this, however, a good deal of quinine was distributed free of cost in most of the districts.

In Fazilka town Mr. S. Chandu Lal, Assistant Surgeon, took special interest in carrying out anti-malarial measures by destroying mosquito larvæ with kerosine oil, filling up and draining depressions, quininisation of school children and free distribution of quinine. A pamphlet on malaria written by him was also freely distributed.

Special precautions were taken by the municipal committee of Palwal to check the spread of malaria by filling up depressions and kerosining pools of water for the destruction of mosquitoes and removal of an objectionable cactus hedge through a special malaria gang under the supervision of Revd. F. W. Hale, a member of the Committee, and Kanwar Raghbir Singh, the Sub-Divisional Officer.

In the Ambala District short leaflets giving the necessary information and the precautions to be observed in avoiding malaria, etc., were distributed.

46. Many borrow-pits in the Civil Lines, Ambala, were filled up on the recommendation of the Civil Surgeon, while 37 notices were issued by the Lahore Municipality for the filling in of depressions, 26 of which have been

complied with, and action is being taken to have the remaining depressions filled in. A "chappar" (pond) near the village Padhana was drained during the year at a cost of Rs. 700.

A pucca floor and a drain were constructed at Jhelum under Railway crossing bridge on the Civil lines road leading to the Cantonment to do away with the accumulation of the rainy water, and in order to check the spread of malaria at Pind Dadan Khan tanks were cleaned during the year.

47. The Deputy Sanitary Commissioner, Punjab, remained *ex-officio* Professor of Hygiene at the Medical College, Lahore, throughout the year and delivered the prescribed course of lectures.

48. The Agent, North-Western Railway, reports that no new towns were formed in the vicinity of the North-Western Railway during the year ending the 31st December 1915.

49. The Multan, Sialkot and Rawalpindi municipalities have secured the services of qualified men, but the municipality of Ludhiana has not yet been able to replace their Health Officer who died shortly after his appointment.

The usual class and examination for Sanitary Inspectors was held during the year, and there are now all told 66 men who have qualified in the Punjab. Some of them have already secured employment, and it is hoped that most of the others will secure appointments shortly.

50. The Choa Saidan Shah and Kaitas fairs were held in the Jhelum District on 8th and 13th April, respectively, the prevalence of plague in and round Choa Saidan Shah, which was widely made known to the people under the orders of the Deputy Commissioner, Jhelum, resulted in the gathering at these fairs being very small, not more than 4,000 as compared with about 34,000 in previous years. In fact there was practically no fair at the former place and only a very small number of persons attended the latter. The usual sanitary arrangements were made and the Additional Deputy Sanitary Commissioner, Punjab, was directed to supervise, remaining there from 6th to 14th April 1915.

Owing to heavy rains the gathering at the Pehowa fair (Karnal District) was much less than was expected, and only about 40,000 people came in from the adjacent districts and Native States. The wells in and round the fair area were disinfected with permanganate of potash, and no other persons, except special Jhewars, were allowed to draw water from the wells. The custom here is for a large number of persons to draw the sacred water themselves, but only those whose vessels and ropes had been disinfected by boiling water for which arrangements were made and passes given, were allowed to do so. The fair lasted from 12th to 15th March and owing to the excellent arrangements made no infectious or contagious diseases were introduced. The medical and sanitary arrangements at this fair were supervised by the Additional Deputy Sanitary Commissioner.

As usual the supervision of the sanitary arrangements at the Baba Farid fair held at Pakpattan on the 14th and 15th November 1915, was left entirely to the Additional Deputy Sanitary Commissioner, Punjab, who arrived at the place on the 8th. Adequate sanitary arrangements were made, and there was no case of contagious or infectious disease. The number of persons who passed through the Bahishti Gate amounted to 47,214, but as many persons pass twice or even oftener it is doubtful if more than 30,000 persons can be considered to have been actually present at the fair.

The number of pilgrims who attended the Nankana Sahib fair held on 21st November 1915 was between 60,000 and 70,000. Most of the pilgrims arrived on the 19th and 20th, and a great majority had left by the evening of the 22nd. The sanitary arrangements were made according to the rules for the management of large fairs, and the supervision was entrusted to the Additional

Deputy Sanitary Commissioner, Punjab, who took this opportunity to make further suggestions for the improvement of the sanitary arrangements for future fairs. His report was sent to the district authorities for necessary action.

It might also be mentioned that a meeting was held on 22nd November 1915 to raise subscriptions for a hospital at Nankana Sahib, and promises of over Rs. 6,000 were made at the spot. I suggested that in the compound of the proposed hospital small shelters, consisting of a pucca platform and a roof supported on disused rails, should be erected for infectious cases to relieve the district board from the recurring expenses of temporary chappar hospitals which are erected every year.

51. As the Provincial Laboratory of the Punjab, the Pasteur Institute at Kasauli reported on the specimens noted below—

Work of the Provincial Laboratory.

Serum diagnosis for typhoid fever	...	...	43
„ „ „ paratyphoid A. }	...	...	26
„ „ „ „ B. }	...	...
„ „ „ Malta fever	...	...	40
Wasserman test for syphilis	...	...	8
Examination of blood for malaria	...	...	27
„ „ sputum, etc., for tubercle bacillus	...	...	81
„ „ tumours	...	...	120
„ „ water	...	...	1
Miscellaneous tests	...	...	5
Examination of brains for Negri bodies	...	...	469
Vaccines sent out	...	...	772 doses.
Autogenous Vaccines sent out	...	...	243 „
Tuberculin sent out up to 31st July 1915	...	...	1,407 „
Total			<u>3,242</u>

LAHORE: }
12th May 1916.

H. HENDLEY, COLONEL, I.M.S.,
Offg. Sanitary Commissioner, Punjab.

APPENDIX A.

PROCEEDINGS OF THE SANITARY BOARD, PUNJAB.

The constitution of the Board was the same as in 1914, except that Colonel C. J. Bamber, I.M.S., held additional charge of the post of Secretary to the Board from the commencement of the year till the forenoon of the 12th July 1915, when he was relieved by me. I held additional charge till the end of the year.

The Board met three times during the year.

Out of the balance of Rs. 82,209 of the grant of 3 lakhs placed at the disposal of the Board for distribution to municipalities as grants-in-aid during the year 1914-15, the following grants were sanctioned between 1st January and 31st March 1915 and the amount remaining, Rs. 48,037 withdrawn by Government owing to financial stringency due to the war:—

	Rs.
Gojra drainage scheme	3,719
Sambrial drainage and pavement	100
Daska drainage and payment	250
Amritsar combined slaughter-house (additional grant)	1,388
Rupar drainage	15,825
Tandlianwala drainage scheme	12,490
Total ...	34,172

Out of the balance of Rs. 2,40,436 of the grant of 2 lakhs-and-a-half placed at the disposal of the Board for distribution to district boards as grants-in-aid for Sanitary works during 1914-15, the following grants were made between 1st January and 31st March 1915, and the remainder Rs. 2,04,156 withdrawn by Government owing to financial stringency:—

	Rs.
Sultan Wind paving and drainage	10,000
Gullu Shah fair area water-supply scheme	5,000
Nurpur (Rawalpindi District) fair area water-supply scheme... ..	21,280
Total ...	36,280

The annual grant this year was enhanced from 7½ lakhs to 8 lakhs and the Sanitary Board would have been able to dispose of the entire grant, but for circumstances which rendered a reduction in this amount necessary and a subsequent withdrawal of Rs. 4,26,564.

The grant of 8 lakhs consisted of the following:—

	Rs.
Urban grant	3,00,000
Additional urban grant	2,00,000
Rural grant	1,00,000
Additional grant (reserved with Government)	2,00,000
Total ...	8,00,000

Out of the urban grant of 5 lakhs, the following grants were made up to 31st October leaving a balance of Rs. 1,43,463 which was withdrawn by Government:—

	Rs.
Sialkot water-supply scheme	50,000
Hazro drainage scheme	1,231
Repairs to Kalka water-supply scheme	1,180
Lala Musa drainage scheme	7,489
Kalka drainage scheme	21,045
Moga drainage scheme	10,560
Improvement to Rawalpindi Intra-mural drainage	42,360
Rewari water-supply	70,000
Dera Ghazi Khan water-supply extension scheme	1,15,617
Experimental and printing purposes	1,200
Gurdaspur intra-mural drainage	8,723
Sargodha filling pits	1,291
Tandlianwala water-supply extension scheme	23,000
Kalka drainage scheme	2,841
Total ...	3,56,537

The grant of 2 lakhs for the Montgomery water-supply scheme was sanctioned by the Board on the condition that the remainder is provided by Government but as Government could not in the present state of affairs afford Rs. 74,029 the remainder of the cost, the grant-in-aid was not allotted.

A sum of Rs. 50,000 was sanctioned for the Sargodha water-supply scheme but was not allotted as the scheme had not been administratively sanctioned by Government, this being the condition on which the grant-in-aid was sanctioned. Administrative sanction was refused as the balance of the cost (Rs. 70,000) could not be provided locally.

Out of the grant of one lakh for rural sanitation placed at the disposal of the Board during the year 1915-16, the following grants-in-aid were sanctioned up to 31st October 1915, leaving a balance of Rs. 84,601 which was withdrawn by Government:—

	Rs.
Kotli Loharan drainage scheme	3,500
Rural scheme of the Gujrat District	7,100
Pipe at Chitti dill bungalow	804
Nurpur (Rawalpindi District) fair area water-supply scheme	3,995
Total	15,399

The additional grant of two lakhs reserved at first with the Government was finally placed at the disposal of the Board but was also withdrawn along with the other remaining grants.

The schemes noted below were approved by the Sanitary Board and submitted to the Local Government in the civil department for administrative sanction which was accorded in each case—

	Rs.
Gujranwala water-supply scheme	5,04,918
Amritsar city improvement scheme	1,63,650

Revised administrative sanction was also accorded to the Sialkot water-supply and Nurpur (Rawalpindi District) fair area water-supply scheme at a revised estimated cost of Rs. 5,09,403 and Rs. 25,275, respectively.

The scheme relating to the sanitation of Murree-Kohala Road was postponed by Government as no funds were available for the project.

In accordance with the powers delegated to the Sanitary Board by Government to accord administrative sanction to sanitary schemes, the cost of which does not exceed one lakh, the board approved of the following schemes and administrative sanction was accorded in each case:—

	Rs.
Eminabad drainage scheme	25,054
Rupar drainage scheme	31,650
Kalka drainage scheme	21,045
Kotli Loharan drainage scheme	10,500
Moga drainage scheme	21,121
Improvement to Rawalpindi drainage scheme	92,360
Gurdaspur intra-mural drainage scheme	17,446
Tandlianwala water-supply scheme	46,007

The Board accorded revised administrative sanction to the Lala Musa drainage scheme at a revised estimated cost of Rs. 20,889.

Government in the Public Works Department accorded technical sanction to the schemes noted below which had previously received the approval of the Board—

	Rs.
Dera Ghazi Khan water-supply extension scheme	1,65,617
Dalhousie water-supply extension scheme	15,903
Lahore northern storm water drainage scheme	33,210
Lala Musa drainage scheme	20,889
Improvement to Rawalpindi District drainage scheme	92,318
Shujahabad drainage scheme	15,302
Bhera drainage scheme	78,682
Nurpur (Rawalpindi District) fair area water-supply scheme	25,275

Revised technical sanction was accorded to the Sialkot water-supply scheme and trial boring at Pasrur in connection with the water-supply scheme at a revised estimated cost of Rs. 5,09,403 and Rs. 7,731, respectively.

The work of the Board was to a very great extent suspended for the latter part of the year owing to the withdrawal of funds by Government.

APPENDIX B.

ANNUAL REPORT OF THE SANITARY ENGINEER TO GOVERNMENT,
PUNJAB, FOR THE YEAR 1915.

THE post of the Sanitary Engineer to Government, Punjab, was held by Mr. A. S. Montgomery, up to the 28th September and by Mr. V. Stainton from the 29th of that month to the close of the year.

2. *Simla*.—The important sanitary scheme of the Chair water supply extension (estimated cost Rs. 5,75,587, which was completed in 1914 and handed over for maintenance to the municipal committee, continued to be maintained by that body during the year under report on the same conditions as were previously laid down by the Local Government in connection with the operation and maintenance of pumps and mains. Orders do not seem to have yet been passed for the subsidiary works enumerated in the report for the year 1914, which were discussed and reported on by the Fenton Committee of 1913 and further considered by the Porter Committee of 1914.

The miscellaneous small sub-head estimate of the scheme which had necessarily been kept open, was closed and a comprehensive completion report amounting to Rs. 5,67,721 against the main estimate for the scheme submitted during the year.

The usual half-yearly inspections of the water supply and sanitary arrangements of the Viceregal Lodge Estates were made during the year.

3. *Amritsar*.—The work on the under-ground sewerage scheme of a part (Sant Singh and Dhab Khatikan area) of the city (estimated cost Rs. 2,36,008) which was entrusted for execution to Messrs. Lane Brown and Hewlett, Consulting Engineers of Lucknow, was completed during the year. This underground system commands an area of over 76 acres with a population of 15,530. The work has been carried out in a most satisfactory manner and if the system is properly looked after and regularly flushed it should prove a great boon to the inhabitants and at the same time afford an excellent example of a model up-to-date sanitary scheme for other municipalities. The Sanitary Engineer had advised the committee to have this system extended to the entire area of the city and to have the project for the remaining portion of the city drawn up and work carried out by the same expert firm.

The work of renewal of the conservancy tramway lines for the renewal of city refuse and the substitution of locomotive traction in place of horse traction (estimated cost Rs. 55,000) was completed by the Municipal Committees' own Engineer and the completed scheme brought into operation. It is now contemplated to still further extend the track and increase the number of engines and wagons which will greatly benefit the city.

The work of filling in the dhabs round the city (estimated cost Rs. 1½ lakh) which was originally computed at 61¼ lakhs cubic feet of filling and since revised at 81¾ lakhs cubic feet is being completed. This 33 per cent. extra work necessitated the revision of the original estimate.

4. *Lahore*.—Messrs. Lane Brown and Hewlett, Consulting Engineers of Lucknow, who were, on the advice of the Sanitary Engineer, engaged for the preparation of a complete detailed project for an underground water borne sewerage system for Lahore city and civil station, which was administratively sanctioned for Rs. 15½ lakhs in 1913 have submitted the detailed project to the Municipal Committee. It is now under scrutiny by the Municipal Engineer, in consultation with the Sanitary Engineer.

The work of constructing the northern storm water outfall drain (estimated cost Rs. 33,210) is in progress.

In the Borstal Central Jail, 2 tube wells are being put down for the supply of water and a reservoir built for its storage. This work is combined with that of a watch tower. The original estimate which amount to Rs. 18,050 had to be revised to cover the cost of extra work subsequently found necessary and the revised estimate which awaits sanction amounts to Rs. 28,889. The total expenditure up to the close of the year was Rs. 12,326.

5. *Sialkot*.—The water supply scheme was completed, opened by His Honour the Lieutenant-Governor and handed over for maintenance to Municipal Committee during the year. Including Rs. 37,400 still payable for the pumping machinery, the total expenditure on the scheme comes to Rs. 4,66,839 against the revised sanctioned estimate of Rs. 5,09,403. The difference between these two sums, out of which a few extra items necessary for the efficient and successful working of the scheme have yet to be paid for, will represent a good saving.

The recuperative tests made on these tube wells to date shew that the actual amount of water pumped closely corresponds to the anticipated quantity so that the yield has so far been very satisfactory.

6. *Ambala*.—Work on an extension to the *intra-mural* drainage system, the estimate for which amounted to Rs. 8,921 is in hand and has been carried out to the extent of more than one half.

7. *Multan*.—The tests of the experimental tube well which was sunk in advance of the construction of the water supply scheme; in order to be quite certain of the yield expected from the sub-soil and its suitability for such wells, were carried out with satisfactory results. There now seems to be no fear in relying on tube wells for the supply of drinking water for this city. The original project which was sanctioned for Rs. 3,52,173 in the year preceding that under report had to be revised in the light of experience gained from the actual construction of tube wells in the Sialkot water supply scheme. The amount of the amended estimate is Rs. 4,10,506 and it awaits sanction.

The city *intra-mural* and suburban drainage scheme amounting to Rs. 3,82,565 has been sanctioned. The Municipal Committee propose on the advice of the Sanitary Engineer, after obtaining requisite sanction, to spend at once on this work the sum of Rs. 3 lakhs which they have available and to put in hand at once those urgent portions of the drainage scheme which are not dependent on the new water supply scheme. Subsequently, as funds become available, those portions of both the drainage and water supply schemes will be put in hand in order of urgency with due regard to their inter-dependency. It might here be noted that of the sum of Rs. 3 lakhs which the committee have now at their disposal 2½ lakhs represent grants-in-aid namely 1 lakh for this scheme and 1½ lakh for the water supply scheme.

8. *Jullundur*.—The Municipal Committee are anxious to have a complete water supply scheme provided for this city and bastis and also to have their drainage system brought up to date. In connection with the former, an experimental boring tube, for which an estimate amounting to Rs. 2,220 had been sanctioned, was sunk, but the results though fairly satisfactory were not good enough to justify our reliance on the results without further experiments with strainers. It is now proposed to put down a 5 inches strainer in the above mentioned well or a new one, with a view to correctly gauging the yield of the sub-soil. If the results of these experiments are satisfactory, a project for the scheme will be worked out for this source of supply and submitted for administrative sanction.

With regard to the drainage scheme, the detailed project is under preparation in this office.

9. *Ferozepore*.—The intramural drainage scheme (estimated cost Rs. 24,016) work on which was commenced in 1914 made good progress under the supervision of the local body and is expected to be completed shortly.

10. *Lyallpur*.—The new pumping plant and the two new filter beds forming a part of the main extension to the water supply scheme estimated to cost Rs. 1,55,530 and which is yet under sanction, were completed during the year.

11. *Jhang*.—The work of regarding the Gaur Nallah with a view to preventing stagnation of water round the city is practically complete. The total expense up to the close of the year is Rs. 12,302 against the sanctioned estimate of Rs. 14,884.

12. *Dera Ghazi Khan*.—Work on the extension of water supply scheme (estimated cost Rs. 1,65,617) was put in hand and good progress has been made. The tube well sumps for head works were sunk and plugged and the brick work of storage tanks finished up to floor level (*i.e.* 16 feet above ground) and almost all the pipes purchased Rs. 59,759 being the total expenditure up to the close of the year.

The rough project for Rs. 4,13,982 for the drainage of the town which was prepared in the year preceding that under report also the project for the storm water drainage prepared last year amounting to Rs. 26,648 still await administrative sanction. The latter will need amendment as it can be reduced in cost, now that the Irrigation Department have agreed to allow us to discharge storm water direct into the canal instead of syphoning under the canal and discharging it beyond the canal.

13. *Skujabad in the Multan District*.—An estimate for a drainage scheme was sanctioned for Rs. 15,302. Manufacture of special bricks is in hand and work will now be started.

14. *Mianwali*.—The experimental borings which were reported to be in hand in the last report in connection with the proposed water supply scheme were completed during the year and a detailed project worked out, but it had to be returned to the Executive Engineer for modification.

The modified project is now under consideration in this office.

15. *Pasrur in Sialkot District*.—To determine the suitability of subsoil for putting down tube wells for water-supply, an experimental tube well, which will subsequently form part of the Head Works and the estimated cost of which with that of the boring plant is Rs. 12,931 is in hand. The sump well 6 feet in diameter has been sunk to a depth of 58½ feet and the strainer tubes and piping have been purchased. Another trial boring close to this well has since been found necessary before further proceedings with the tube well as great difficulty has been experienced with thick bands of hard clay.

16. *Wasirabad in Gujranwala District.*—Work on the Drainage Scheme (estimated cost Rs. 64,251 was commenced and good progress has been made. The total expenditure upto the end of the year is Rs. 31,500.

17. *Jandiala in Amritsar District.*—The work of filling up certain depressions and constructing an extra mural drain with a collecting tank for the east side of the town, the estimated cost of which is Rs. 21,883 has progressed satisfactorily. The filling work has been completed and the rest is well in hand. A project for draining the west side of the town has been prepared.

18. *Majitha in the Amritsar District.*—The work on the drainage scheme for which an estimate amounting to Rs. 12,064 was sanctioned during the year 1914 was well in hand. It could not be pushed on to completion owing to work having to be stopped pending approval to the re-design of the outfall and other modifications suggested by the Deputy Commissioner. The total expenditure upto the close of the year was Rs. 3,154 and the work is about to be started again on revised lines.

19. *Tandlianwala in Lyallpur District.*—The drainage scheme for which a revised estimate amounting to Rs. 75,189 was sanctioned during the year 1914 is now complete except a little work required to be done on the sullage tanks.

20. *Isa Khel in Mianwali District.*—The water-supply scheme for this town, which was initiated as far back as 1905 was sanctioned at an estimated cost of Rs. 45,300 and work started in 1913. After a personal inspection of the locality, Mr. Montgomery, the then Sanitary Engineer, found that further borings were necessary at different sites with a view to securing a better quality of water so work was stopped pending result of these fresh borings. After numerous borings in various localities and failing to obtain sweet water it was decided to locate the tube wells where the best available results were obtained with the least brackish water. The project revised on these lines and amounting to Rs. 71,270 has not yet been sanctioned as the local body has not yet been able to arrange for extra funds. The Civil authorities now contemplate abandoning the scheme in consequence of the proposal for transferring the Tahsil Head Quarters from Isa Khel.

21. *Bhera in Shahpur District.*—An estimate amounting to Rs. 78,682 for the extra mural drainage scheme was sanctioned during the year. Actual construction was, however, kept in abeyance pending detailed surveys to determine whether the capacity of the depression in which the outfall was to discharge was adequate and also to safeguard the local body from any subsequent suits for compensation to crops and buildings from any flood discharges. After careful investigation the project has now been returned for execution and it is hoped that work will now be pushed on vigorously.

22. The out-door survey staff attached to this office has been fully engaged during the year and has again done most useful work in carrying out surveys and working out drainage schemes for the various local bodies in the Punjab. For some months during the year they were engaged on the preparation of detailed surveys of the town and Bastis at Jullundur required for the drainage scheme project which is in hand and is expected to amount to Rs. 4 $\frac{3}{4}$ lakhs.

The other drainage schemes, which were surveyed and levelled by the Survey Staff and which were subsequently worked out in detail in this office are:—

	Rough cost.
	Rs.
1. Gujranwala (extra mural as well as the suburban intra-mural)	2,69,510
2. Extra-mural drainage scheme for Jandiala in Amritsar District	16,395
3. Drainage scheme for Hoshiarpur and its suburbs	1,23,267
4. Jagadhri drainage scheme	88,439
5. Shujabad intra-mural drainage	32,723
6. Palwal drainage scheme	69,319
7. Gurdaspur intra-mural drainage scheme	18,324
8. Filling up depression at Palwal	23,165
9. Eminabad drainage	31,751
10. Kalka drainage	36,531
11. Sialkot drainage	3,46,410
Total	10,55,834

The total cost of the out-door establishment including the services of the draftsman who prepared the plans for these various schemes has come to Rs. 4,002 for the year which works out at about annas four per cent. on the cost of schemes prepared including that for Jullundur.

23. Various sanitary schemes completed or in progress in the province were inspected either by the Sanitary Engineer or his Personal Assistant and inspection notes were written and advice given to those concerned. It is noted with regret that in many instances completed sanitary schemes were on inspection found in a very neglected and deplorable condition owing to want of proper maintenance showing great lack of interest on the part of those concerned. This matter is, however, being taken up separately—

- I.—In some cases, the pumping machinery attached to water works installations were found in a very bad state of repair. On the representation of the Sanitary Engineer and the recommendation of the Sanitary Board, the Local Government has since issued orders that all the local bodies responsible for the up-keep of these plants should have them inspected regularly each year by an expert firm of constructional engineers.
- II.—It is hoped that this procedure will materially improve the up-keep of water works plant in the province besides effecting a considerable ultimate saving to the local bodies concerned.
- III.—Excessive waste of water is apparent on various water works installations owing to leaky house connections, distribution mains, and hydrants, also very frequently by abuse of water for garden purposes. This waste can materially be prevented by the proper use of the district metering system and efficient night inspections by the Superintendent and his inspection staff. In several cases it has been found that local bodies have not brought into use the waste water metres on their systems which were handed over to them with the water works after construction and the result has been that great and unnecessary waste has taken place in the system and consequently more coal used for pumping and greater expenditure. Local bodies will find that it will pay them to provide an efficient night inspection staff and they should not begrudge this small expenditure.
- IV.—As an instance in point, I would note the case of Mr. Jarman, the Municipal Engineer at Amritsar who has, during the last hot weather, done good work towards checking and preventing excessive waste, by overhauling and repairing his district metering system and by personal night inspections, saving thereby no less than 3 million gallons in less than 6 months.
- V.—A study of this system by the officials concerned of other local bodies and a proper provision of a similar system for all water works installations, which have not yet been provided with this system, is strongly recommended.

24. The detailed estimates, which were prepared and recast in the office of the Sanitary Engineer are 10 in number, the cost of which aggregate Rs. 12,37,052. The number of the rough and detailed rough estimates prepared for administrative sanction is 15 and their total cost reached a sum of Rs. 18,41,519.

25. Both the rough and fair estimates which were scrutinized and finally approved by the Sanitary Engineer are 31 in number, the total of which amounts to Rs. 10,58,260.

26. Nine estimates aggregating Rs. 4,54,682 were technically sanctioned by the Local Government in the Public Works Department in addition to the 3 revised estimates for Rs. 5,28,459.

27. The accompanying statement shows the water pumped at the various water works in the province together with the cost of pumping.

28. Notwithstanding the curtailment of grants-in-aid in the case of local bodies owing to the present financial stringency yet the preparation and scrutiny of complex sanitary schemes out-door inspections also clerical work of this office have been as arduous and onerous as in the previous year.

29. In conclusion I would place on record my great appreciation of the excellent work and zealous energy of my Personal Assistant Rai Sahib Lala Amar Nath Nanda, who has been of the greatest help to me both in his office and out-door work also of my office staff who have loyally co-operated in disposing of the vastly increased clerical work of this office and maintained its efficiency.

V. STANTON,

Dated 11th April 1916.

Sanitary Engineer to Government, Punjab.

STATEMENT OF WATER PUMPED AND USED IN THE WATER WORKS STATIONS,—SIMLA, LAHORE, AMBALA, AMRITSAR, SARGODHA, LYALLPUR, LUDHIANA AND DERA GHAZI KHAN, AND COST OF PUMPING IN 1915.

No.	Name of water works.	Population supplied No.	Water used daily average, gallons.	Daily consumption per head in gallons.	Lift including friction in feet.	Daily hours of pumping average throughout year.	Average pump horse power during year.	QUANTITY AND COST OF FUEL USED PER ANNUM.		Coal or oil consumption per horse power hour.	Cost of small stores and establishment at pumping station.	Total cost of fuel, small stores and establishment.	Cost of pumping per horse power hour.	Original level average of water surface in all the wells.	Average of water surface level below ground level of all the wells in the year 1914.	REMARKS.
								Wood or electric current units.	Coal cost.							
1	Simla	80,316	366,230	12.03	1,300 2,800	9	132.5	5,98,016	Rs. 18,688	...	Rs. A. P.	Rs. A. P.	Annas.	...	...
						5	72.1	1,66,655	5,208	...	5,849 0 0	11,075 0 0	1.34	...	...
2	Lahore	208,126	2,968,394	14.26	123	18	101	24 mds. Rs. 15	730 tons Rs. 10,767	2.4 lbs.	12,194 0 0	22,976 0 0	0 0 6.6	No record	Winter 680.7 Summer 687.2	
3	Ambala	24,491	247,941	10.12	75	24	35	Nil.	271.11 tons Cost Rs. 4,609	2 lbs. Approx.	5,655 0 0	10,264 0 0	0 0 6.4	25'—26'	25'—26½'	
4	Amritsar	140,697	1,413,031	10	88 feet	30 hours (3 pumps).	21	Nil.	18,253 mds. Cost Rs. 12,164 10 9	6.5 lbs.	7,754 12 2	19,919 6 11	0 1 4	7' below G. L. 5' after tube wells put in.	10'—9" (1914) 8'—8" (1915)	
5	Sargodha	11,000	69,208.2	6.29	83	12.6	3.05	4½ mds. Rs. 34 8 0	3,837 mds. Rs. 2,048 10 6	22.6	2,680 6 9 C. W. charges Rs. = 505 10 5	5,269 3 8 including canal water charges.	0 5 5	617 96—617.96 S. T. No. 1— S. T. No. 2.	469.8—615.7 No. I—No. II.	Most excessive. President, Municipal Committee's attention will be drawn to this.
6	Lyallpur	19,578	244,719	12.49	75 feet	Hours 15.8	5.86	...	2,800 mds. Cost Rs. 1,286 6 6	6.8 lbs	Rs. A. P. 4,032 3 9	Rs. A. P. 5,318 10 3	0 2 6	Nil	Nil.	
7	Ludhiana	44,170	510,380	11.5	95.5	15.1	B. H. P. 26	mds. srs. 4 30 Cost Rs. 2 12 4	Tons Cwt. 337 14 Cost 5,403 3 2	5.3 lbs.	Small stores Rs. 1,889 12 5 Establishment 7,439 13 5	14,735 9 4	0 1 8 Approx.	North 28' South 31'	North 30' South 33'—4"	
8	Dera Ghazi Khan	17,000	73,486	4.32	24.6	8.95	B. H. P. 10	3,412 gallons oil @ 0 11 0 per gallon—Rs. 2,346.	Small stores Rs. 235 Establishment Rs. 1,799 Total Rs. 2,034	1.04 lbs. oil.	Small stores Rs. 235 Establishment Rs. 1,799	4,380 0 0	0 2 1.7	379.6	379.57	

V. STANTON,

Sanitary Engineer to Government, Punjab.

APPENDIX C.

Statement showing the death rates from cholera, small-pox, fevers and dysentery and diarrhoea for the five years preceding and for the period since the introduction of drainage or water-supply or both in the undermentioned towns:—

TOWNS.			DATE OF COMPLETION OF WORKS OF		AVERAGE ANNUAL DEATH RATE SINCE THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH.				AVERAGE ANNUAL DEATH RATE FOR THE FIVE YEARS PERIOD PRECEDING THE INTRODUCTION OF DRAINAGE OR WATER-SUPPLY OR BOTH.				REMARKS.
I			Drainage.	Water-supply.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	Cholera.	Small-pox.	Fevers.	Dysentery and diarrhoea.	
			2	3	4	5	6	7	8	9	10	11	12
Ambala	...	...	...	1895	0·4	0·4	12·0	3·6	0·5	0·4	19·3	6·4	
Simla	...	...	1893	1893	0·02	0·5	13·1	0·8	...	1·1	17·1	1·4	
Ludhiana	...	...	1895	1909	0·5	0·8	15·5	1·6	0·4	2·7	20·8	1·6	
Jagraon	...	...	1907	...	0·5	1·6	11·6	1·5	0·6	1·5	9·3	2·0	
Ferozepore	...	..	1908	...	0·4	0·7	11·3	1·3	0·3	1·1	25·4	1·1	
Zira	...	...	1913	...	0·9	2·8	14·5	0·6	0·3	4·0	16·6	0·9	
Fazilka	...	...	1913	...	1·4	1·8	18·6	1·8	2·2	2·6	21·4	1·7	
Lahore	...	...	...	1881	0·8	0·7	16·6	1·6	1·9	1·6	27·8	2·3	
Amritsar	...	...	...	1904	0·8	1·4	22·7	2·0	0·4	0·7	31·3	1·8	
Gurdaspur	...	...	1914	...	0·4	...	12·7	3·3	0·8	0·5	13·2	2·6	
Dalhousie	...	...	...	1894	0·1	0·1	11·9	2·0	...	...	9·6	2·4	
Pathankot	...	...	1915	...	...	0·1	10·3	4·3	0·8	0·7	12·4	2·8	
Sialkot	...	...	...	1915	0·1	...	9·2	2·6	3·0	1·2	9·6	2·3	
Gujranwala	...	...	1892	...	0·5	0·6	16·5	1·2	0·5	0·6	19·7	1·7	
Gujrat	...	...	1906	...	1·1	0·4	17·4	1·9	0·3	0·2	16·9	1·9	
Sargodha	...	...	1907	1907	*...	*0·3	*4·7	*0·2	Not available.				
Jhelum	...	...	1908	...	0·1	0·5	9·9	1·7	1·5	0·3	14·0	2·1	
Pind Dadan Khan	...	...	1909	1909	0·1	1·1	19·1	3·4	1·1	0·7	23·1	3·6	
Rawalpindi	...	...	1907	1887	0·6	0·3	19·2	2·3	0·5	0·1	16·4	3·4	
Murree	...	...	...	1894	0·1	0·1	17·1	2·3	0·7	0·4	14·8	0·9	
Mianwali	...	...	...	1904	0·3	0·7	20·0	2·4	Not available.				
Lyalpur	...	...	1904	1904	0·1	0·7	11·3	0·8	†2·8	†0·4	†16·3	†2·1	
Multan	...	...	1907	...	0·2	0·9	18·1	2·4	0·01	1·9	16·9	2·4	
Dera Ghazi Khan...	...	...	...	1913	...	0·9	16·6	1·5	2·0	0·6	15·9	1·6	
Kalka	...	...	...	1890	0·4	0·1	13·6	2·2	1·7	0·2	15·2	3·9	

*Figures for 1914 and 1915.

†Figures available for four years only.

ANNUAL FORM No. I.

STATEMENT SHOWING THE BIRTHS REGISTERED IN THE DISTRICTS OF THE PUNJAB
DURING THE YEAR 1915.

1	2	3			4			5			6	7	8	9			10
Number.	Districts.	POPULATION ACCORDING TO CENSUS OF 1911.*			NUMBER OF BIRTHS REGISTERED.			RATIO OF BIRTHS PER 1,000 OF POPULATION.			Number of males born to every 100 females, born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	MEAN RATIO OF BIRTHS PER 1,000 DURING PREVIOUS FIVE YEARS.			Number.
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.				Males.	Females.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	AMBALA DIVI- SION.																
1	Hissar ...	438,458	366,431	804,889	20,471	19,075	39,546	25·4	23·7	49·1	107·3	20·9	...	25·2	23·4	48·6	1
2	Rohtak ...	385,401	329,433	714,834	19,151	17,486	36,637	26·8	24·5	51·3	109·5	26·5	...	25·6	23·3	48·9	2
3	Gurgaon ...	389,215	339,952	729,167	18,764	17,809	36,573	25·7	24·4	50·2	105·4	26·0	...	24·2	22·5	46·7	3
4	Karnal ...	437,698	362,089	799,787	19,953	18,320	38,273	24·9	22·9	47·9	108·9	15·6	...	25·2	23·1	48·3	4
5	Ambala ...	357,470	275,083	632,553	13,941	13,309	27,250	22·0	21·0	43·1	104·7	8·7	...	22·9	21·1	44·1	5
6	Simla ...	22,015	12,955	34,970	406	838	744	11·6	9·7	21·3	120·1	1·6	...	10·6	9·7	20·3	6
	JULLUNDUR DIVISION.																
7	Kangra ...	398,401	368,285	766,686	15,344	14,319	29,663	20·0	18·7	38·7	107·2	7·4	...	19·4	18·2	37·6	7
8	Hoshiarpur ...	501,510	417,059	918,569	19,725	18,206	37,931	21·5	19·8	41·3	108·3	2·0	...	21·9	20·2	42·1	8
9	Jullundur ...	440,599	347,357	787,956	17,477	16,660	34,137	22·2	21·1	43·3	104·9	...	3·7	23·3	22·1	45·4	9
10	Ludhiana ...	293,531	223,661	517,192	12,481	11,934	24,415	24·1	23·1	47·2	104·6	5·8	...	25·0	23·2	48·2	10
11	Ferozepore ...	520,868	412,631	933,499	23,092	21,068	44,160	24·7	22·6	47·3	109·6	12·8	...	26·0	23·6	49·6	11
	LAHORE DIVI- SION.																
12	Lahore ...	581,498	436,244	1,017,742	25,176	22,645	47,821	24·7	22·3	47·0	111·2	8·3	...	24·9	22·6	47·5	12
13	Amritsar ...	495,533	383,778	879,311	21,937	20,955	42,292	24·9	23·1	48·1	107·8	...	4·2	26·1	24·2	50·3	13
14	Gurdaspur ...	466,115	366,446	832,561	20,210	18,822	39,032	24·3	22·6	46·9	107·4	0·8	...	24·7	22·9	47·5	14
15	Sialkot ...	530,755	432,524	963,279	23,215	21,205	44,420	24·1	22·0	46·1	109·5	0·1	...	25·3	23·4	48·7	15
16	Gujranwala ...	518,251	405,168	923,419	21,064	18,786	39,850	22·8	20·3	43·2	112·1	0·2	...	24·0	21·4	45·4	16
	RAWALPINDI DIVISION.																
17	Gujrat ...	400,596	345,038	745,634	15,806	14,194	30,000	21·2	19·0	40·2	111·4	...	15·6	23·8	21·8	45·6	17
18	Shahpur ...	376,886	310,480	687,366	14,854	13,232	28,086	21·6	19·3	40·9	112·3	7·4	...	21·8	19·4	41·3	18
19	Jhelum ..	262,228	241,967	504,195	9,401	8,566	17,967	18·6	17·0	35·6	109·7	...	13·2	20·5	18·3	38·9	19
20	Rawalpindi ...	267,724	239,918	507,642	10,319	9,528	19,847	20·3	18·8	39·1	108·3	...	18·3	20·9	19·1	40·0	20
21	Attock ...	270,392	244,894	515,286	10,259	8,796	19,055	19·9	17·1	37·0	116·6	...	3·9	21·4	19·2	40·7	21
22	Mianwali ...	179,897	161,480	341,377	7,862	6,954	14,816	23·0	20·4	43·4	113·1	17·6	...	22·7	20·1	42·8	22
	MULTAN DIVI- SION.																
23	Montgomery ...	276,119	227,996	504,115	10,910	9,824	20,734	21·6	19·5	41·1	111·1	16·9	...	23·1	20·4	43·6	23
24	Lyallpur ..	503,644	385,251	888,895	21,628	19,784	41,412	24·3	22·3	46·6	109·8	21·4	...	25·4	23·5	48·9	24
25	Jhang ...	277,128	238,398	515,526	12,553	10,828	23,381	24·3	21·0	45·4	115·9	19·9	...	23·6	21·4	44·9	25
26	Multan ...	435,410	365,965	801,375	15,822	13,886	29,708	19·7	17·3	37·1	113·9	13·3	...	22·5	19·9	42·4	26
27	Muzaffargarh ..	308,350	261,111	569,461	10,654	9,073	19,727	18·7	15·9	34·6	117·4	11·2	...	20·9	18·0	38·9	27
28	Dera Ghazi Khan	272,409	227,451	499,860	8,480	7,055	15,535	17·0	14·1	31·1	120·2	12·1	...	16·6	13·9	30·5	28
	Total ...	10,608,101	8,729,045	19,337,146	440,955	402,057	843,012	22·8	20·8	43·6	109·7	7·3	...	23·5	21·4	44·9	

*Excluding population of military cantonments.

STATEMENT OF BIRTHS AND DEATHS REGISTERED IN EACH

1	2	3	4	5			6		7		
No.	DISTRICTS.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1911.)			BIRTHS.		NUMBER OF DEATHS REGISTERED.		
				Males.	Females.	Total.	Total number.	Birth rate per 1,000 of population.	Males.	Females.	Total.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar	5,213	154	438,458	360,431	804,889	39,546	49·1	11,905	10,757	22,662
2	Rohtak	2,248	318	385,401	329,433	714,834	36,637	51·3	9,233	8,501	17,734
3	Gurgaon	2,264	322	389,215	339,952	729,167	36,573	50·2	9,217	8,427	17,644
4	Sarnal	3,153	254	437,698	362,089	799,787	33,273	47·9	13,451	12,346	25,797
5	Ambala	1,851	342	357,470	275,083	632,553	27,250	43·1	11,020	10,723	21,743
6	Simla	101	346	22,015	12,955	34,970	744	21·3	382	308	690
	JULLUNDUR DIVISION.										
7	Kangra	9,978	77	398,401	368,285	766,686	29,663	38·7	11,930	12,028	23,958
8	Hoshiarpur	2,247	409	501,510	417,059	918,569	37,931	41·3	18,215	17,871	36,086
9	Jullundur	1,431	551	440,599	347,857	787,956	34,137	43·3	18,462	18,543	37,010
10	Ludhiana	1,452	356	293,531	223,631	517,192	21,415	47·2	10,897	10,505	21,402
11	Ferozepore	4,286	218	520,863	412,631	933,499	44,160	47·3	16,857	15,324	32,181
	LAHORE DIVISION.										
12	Lahore	2,824	360	581,493	436,244	1,017,742	47,821	47·0	20,979	18,426	39,405
13	Amritsar	1,601	549	495,533	383,778	879,311	42,292	48·1	23,478	22,505	45,983
14	Gurdaspur	1,889	441	466,115	366,446	832,561	39,032	46·9	19,812	18,533	38,345
15	Sialkot	1,991	484	530,755	432,524	963,279	44,420	46·1	22,060	22,222	44,282
16	Gujranwala	4,032	223	518,251	403,163	923,419	39,850	43·2	21,299	18,433	39,732
	RAWALPINDI DIVISION.										
17	Gujrat	2,051	364	400,596	345,038	745,634	30,000	40·2	20,547	21,092	41,639
18	Shalpur	5,097	135	376,883	310,430	687,366	28,086	40·9	11,753	11,270	23,023
19	Jhelum	2,813	179	262,228	241,967	504,195	17,967	35·6	11,874	12,747	24,621
20	Rawalpindi	2,010	253	267,724	239,918	507,642	19,847	39·1	14,064	15,085	29,149
21	Attock	4,025	128	270,392	244,894	515,286	19,055	37·0	10,431	10,631	21,062
22	Mianwali	5,395	63	179,897	161,480	341,377	14,816	43·4	4,758	4,048	8,806
	MULTAN DIVISION.										
23	Montgomery	4,465	113	276,119	227,996	504,115	20,734	41·1	6,291	5,897	12,188
24	Lyallpur	3,340	266	503,644	385,251	888,895	41,412	46·6	11,310	11,087	22,397
25	Jhang	3,363	153	277,123	233,398	510,526	23,331	45·4	6,962	6,190	13,152
26	Multan	6,107	131	435,410	365,965	801,375	29,708	37·1	10,192	8,846	19,033
27	Muzaffargarh	6,052	94	308,350	261,111	569,461	19,727	34·6	7,263	6,075	13,343
28	Dera Ghazi Khan	5,325	94	272,409	227,451	499,860	15,535	31·1	5,169	4,304	9,473
	Total	96,654	200	106,608,101	8,729,015	115,337,116	843,012	43·6	359,821	342,729	702,550

NOTE.—Those born dead are not included

No. II.
DISTRICT OF THE PUNJAB DURING THE YEAR 1915.

8	9											10			11
Number of deaths of males to every 100 deaths of females.	DEATHS PER 1,000 OF POPULATION FROM											MEAN RATIO OF DEATHS PER 1,000 DURING PREVIOUS FIVE YEARS.			No.
	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory cases.	Injuries.	All other causes.	All causes.			Males.	Females.	Total.	
									Males.	Females.	Total.				
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
110.7	1.0	0.1	3.6	14.9	0.5	1.3	0.4	6.4	27.2	29.4	28.2	30.8	33.7	32.1	1
108.6	0.8	0.03	1.4	12.0	0.3	1.5	0.5	8.3	24.0	25.8	24.8	37.8	40.8	39.2	2
109.4	0.2	0.03	1.5	9.5	0.6	1.8	0.5	10.0	23.7	24.8	24.2	43.3	43.5	45.7	3
109.0	0.8	0.1	5.1	15.1	0.4	1.5	0.4	9.0	30.7	34.1	32.3	40.4	45.3	42.6	4
102.8	0.2	0.1	8.7	13.1	0.9	5.3	0.2	6.0	30.3	39.0	34.4	34.0	40.9	37.0	5
124.0	0.1	...	...	7.7	1.2	3.4	0.3	7.2	17.4	23.3	19.7	19.8	25.3	21.8	6
99.2	1.0	0.001	0.03	17.4	1.6	3.5	0.3	7.3	29.9	32.7	31.3	28.3	30.1	29.2	7
101.9	0.1	0.03	14.9	16.9	0.03	2.3	0.3	4.8	36.3	42.9	39.3	31.9	33.7	34.1	8
99.5	0.03	0.1	22.5	13.2	0.5	4.5	0.3	5.9	41.9	53.4	47.0	23.6	35.7	31.8	9
103.7	1.0	0.3	15.5	11.5	0.4	2.8	0.3	9.6	37.1	47.0	41.4	31.6	39.6	35.0	10
110.0	3.1	0.4	5.0	13.7	0.5	1.8	0.1	9.9	32.4	37.1	34.5	27.8	33.4	30.3	11
113.9	2.6	0.3	9.1	16.0	0.7	2.0	0.4	7.6	36.1	42.2	38.7	28.2	33.2	30.4	12
104.3	0.9	0.2	20.0	18.2	1.2	4.6	0.3	6.9	47.4	53.6	52.3	35.1	42.4	38.3	13
106.9	0.1	0.1	20.8	12.7	1.0	10.2	0.3	0.9	42.5	50.6	46.1	32.8	38.3	35.2	14
99.3	0.1	0.01	22.3	13.0	1.2	4.2	0.3	4.5	41.6	51.4	46.0	30.7	35.6	32.9	15
115.5	0.6	0.002	18.5	16.9	0.3	1.2	0.5	5.0	41.1	45.5	43.0	30.0	34.1	31.8	16
97.4	1.7	0.01	36.0	10.8	0.5	2.8	0.2	3.9	51.3	61.1	55.8	25.4	27.9	26.5	17
104.3	0.3	0.1	13.5	11.0	0.4	1.2	0.4	6.6	31.2	36.3	33.5	23.9	25.8	24.8	18
93.2	0.1	0.001	27.4	13.2	0.4	2.2	0.4	5.1	45.3	52.7	48.8	26.4	27.1	26.7	19
93.2	0.4	0.004	23.6	18.0	3.9	2.5	0.5	3.7	52.5	62.9	57.4	29.3	30.6	29.9	20
98.1	0.01	0.003	17.2	18.1	0.1	1.3	0.4	3.8	38.6	43.4	40.9	26.3	27.5	26.8	21
1.75	0.002	0.02	0.002	20.1	0.6	0.6	0.3	4.1	26.5	25.1	25.8	25.6	25.9	25.7	22
106.7	1.2	0.1	1.3	15.8	0.1	0.5	0.5	4.8	22.8	25.9	24.2	21.2	23.3	22.1	23
102.0	0.4	0.1	4.4	13.5	0.2	0.5	0.4	5.7	22.5	23.8	25.2	21.3	26.4	23.5	24
112.5	0.01	0.01	3.4	13.0	0.6	1.3	0.2	7.0	25.1	26.0	25.5	24.9	26.3	25.5	25
115.2	0.001	0.1	0.2	17.3	0.4	0.002	0.5	5.2	23.4	24.2	23.8	23.2	25.5	24.2	26
119.6	0.01	0.03	0.2	20.3	0.1	0.2	0.5	2.0	23.6	23.3	23.4	26.2	27.4	26.7	27
120.1	0.03	0.01	...	16.2	0.4	0.7	0.3	1.4	19.0	18.9	19.0	21.6	21.9	21.7	28
105.0	0.7	0.1	11.5	14.7	0.7	2.4	0.4	5.9	33.9	39.3	36.3	29.5	33.4	31.3	

ANNUAL FORM No. III.

DEATHS REGISTERED IN THE DISTRICTS OF THE PUNJAB DURING EACH MONTH
OF THE YEAR 1915.

1	2	3												4	5
Number.	DISTRICTS.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	Number.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	AMBALA DIVISION.														
1	Hissar ...	1,878	1,610	2,063	2,782	2,556	2,102	1,886	1,537	1,300	1,327	1,447	2,174	22,662	1
2	Rohtak ...	1,326	973	1,085	1,708	2,442	1,890	1,334	1,185	1,022	1,126	1,509	2,134	17,734	2
3	Gurgaon ...	1,451	1,163	1,436	1,648	1,765	1,406	1,201	1,162	1,185	1,204	1,640	2,383	17,644	3
4	Karnal ...	2,192	2,012	2,715	2,951	2,688	2,209	2,190	1,668	1,555	1,418	1,970	2,229	25,797	4
5	Ambala ...	2,084	2,890	2,835	2,956	1,959	1,355	1,328	1,086	1,154	1,255	1,578	1,763	21,743	5
6	Simla ...	55	52	40	58	69	64	65	48	62	67	61	49	690	6
	JULLUNDUR DIVISION.														
7	Kangra ...	1,622	1,487	1,643	1,656	2,971	2,498	1,823	1,700	2,187	2,324	1,948	2,089	23,958	7
8	Hoshiarpur ...	4,227	4,704	5,345	5,576	3,356	1,929	1,677	1,668	1,705	1,844	1,808	2,252	36,086	8
9	Jullundur ..	3,052	4,724	6,636	7,912	4,018	1,579	1,406	1,350	1,293	1,349	1,607	2,034	37,010	9
10	Ludhiana ...	1,724	2,136	3,055	4,132	2,427	1,286	1,270	1,135	844	1,012	1,094	1,277	21,402	10
11	Ferozepore ...	2,192	2,266	3,104	3,674	4,298	3,489	2,509	2,184	1,795	1,922	2,105	2,648	32,181	11
	LAHORE DIVISION.														
12	Lahore ...	2,346	2,461	3,606	6,226	6,728	3,631	2,489	2,362	2,142	2,102	2,356	2,946	39,405	12
13	Amritsar ...	3,533	4,584	7,355	8,622	6,310	2,944	2,284	2,103	1,886	1,906	2,151	2,295	45,983	13
14	Gurdaspur ...	3,699	4,863	5,928	6,901	4,239	2,158	1,739	1,582	1,662	1,725	1,875	1,971	38,345	14
15	Sialkot ...	2,653	3,277	6,192	10,713	7,992	2,450	1,864	1,678	1,655	1,757	1,822	2,219	44,282	15
16	Gujranwala ...	3,892	4,117	6,413	7,048	4,869	2,399	1,997	1,709	1,483	1,474	1,781	2,550	29,732	16
	RAWALPINDI DIVISION.														
17	Gujrat ...	1,850	2,547	5,889	11,420	9,831	1,154	1,912	1,578	1,280	1,302	1,266	1,610	41,639	17
18	Shahpur ...	1,544	1,583	3,028	5,566	2,840	1,349	1,252	1,198	838	924	1,113	1,733	23,028	18
19	Jhelum ...	1,840	2,403	3,868	6,185	3,533	1,106	880	786	781	855	1,055	1,329	24,621	19
20	Rawalpindi ...	2,511	3,033	4,247	5,654	4,523	1,569	1,037	1,120	1,033	1,109	1,446	1,867	29,149	20
21	Attock ...	1,376	1,126	1,807	4,345	4,432	1,468	904	811	807	900	1,185	1,901	21,062	21
22	Mianwali ...	833	713	749	611	683	643	632	653	610	669	790	1,215	8,806	22
	MULTAN DIVISION.														
23	Montgomery ...	1,413	960	1,050	985	1,124	926	914	946	744	762	987	1,377	12,188	23
24	Lyallpur ...	1,574	1,674	2,427	2,980	2,806	1,702	1,584	1,597	1,296	1,268	1,467	2,022	22,397	24
25	Jhang ...	1,267	1,013	1,524	1,488	1,226	849	851	845	845	810	1,003	1,431	13,152	25
26	Multan ...	2,482	1,717	1,559	1,240	1,512	1,211	1,314	1,071	1,179	1,446	1,827	2,480	19,038	26
27	Muzaffargarh ...	1,945	1,271	1,067	962	1,048	802	876	748	774	1,077	1,244	1,529	13,343	27
28	Dera Ghazi Khan	1,073	936	930	729	822	703	614	642	582	718	869	855	9,473	28
	Total for the Province.	57,644	61,798	87,656	116,728	93,067	46,871	39,852	36,152	33,759	35,652	41,009	52,362	702,550	
	Ratio of deaths per 1,000 in each month.	2.98	3.20	4.53	6.04	4.81	2.42	2.06	1.87	1.75	1.84	2.12	2.71	36.33	

ANNUAL FORM No. IV.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM
DIFFERENT DISEASES IN THE DISTRICTS OF THE PUNJAB
DURING THE YEAR 1915.

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5		6		7		8	
No.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.	
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	AMBALA.	HISSAR.	Cholera ... ..	...	...	2	8	6	10	30	28
			Small-pox	8	8	20	18	14	18	3	5
			Plague ... ..	...	...	9	6	28	31	64	48
			Fevers	2,355	1,890	1,098	1,204	408	387	156	152
			Dysentery and Diarrhoea	1	1	1	2	5	6	8	10
			Respiratory diseases	1	3	6	5	7	6	11	10
			Injuries	1	1	4	6	9	9	12	17
			All other causes	1,324	1,128	922	732	188	155	132	111
			Total	3,690	3,031	2,062	1,981	665	622	416	381
2		ROHTAK.	Cholera	8	15	40	28	31	30	30	16
			Small-pox	5	1	4	1	...	1	2	3
			Plague	12	15	22	25	35	46	48	70
			Fevers	1,042	825	683	732	229	198	165	155
			Dysentery and Diarrhoea	30	11	15	18	3	4	4	1
			Respiratory diseases	45	37	24	20	4	5	3	12
			Injuries	3	5	14	15	14	9	18	20
			All other causes	2,336	1,950	528	408	33	26	32	19
			Total	3,481	2,859	1,330	1,247	349	319	302	296
3		GURGAON.	Cholera ... ..	...	...	5	...	7	3	11	7
			Small-pox	6	8	4	3	...	1	2	...
			Plague	20	24	32	44	39	46	52	56
			Fevers	644	719	521	467	158	210	178	148
			Dysentery and Diarrhoea	6	6	12	8	18	8	20	15
			Respiratory diseases ... ..	...	...	12	9	6	9	22	22
			Injuries ... ..	...	...	4	11	2	5	10	7
			All other causes	2,461	1,965	956	945	66	43	40	27
			Total	3,137	2,722	1,546	1,487	296	325	335	282
4		KARNAL.	Cholera	2	...	4	1	7	4	16	8
			Small-pox	11	4	9	5	7	...	5	...
			Plague	49	31	60	49	125	153	219	303
			Fevers	1,473	1,257	883	1,007	321	308	204	197
			Dysentery and Diarrhoea	8	4	7	4	12	9	19	8
			Respiratory diseases	34	16	25	24	37	27	52	49
			Injuries	8	3	10	4	18	12	22	12
			All other causes	2,398	2,110	784	686	83	78	42	47
			Total	3,983	3,425	1,782	1,780	610	591	579	624
5		AMBALA.	Cholera ... ..	...	...	1	...	7	4	4	2
			Small-pox	4	4	5	8	7	4	1	1
			Plague	79	97	85	100	115	259	211	241
			Fevers	1,787	1,750	435	373	132	264	159	277
			Dysentery and Diarrhoea	21	22	32	25	35	19	39	20
			Respiratory diseases	308	353	426	507	121	105	30	86
			Injuries ... ..	...	...	...	...	...	...	...	...
			All other causes	306	421	400	393	156	65	100	67
			Total	2,505	2,647	1,384	1,406	573	720	544	694
6		SIMLA.	Cholera ... ..	...	...	...	...	...	...	...	...
			Small-pox ... ..	...	...	...	...	...	...	...	...
			Plague ... ..	...	...	...	...	...	...	...	...
			Fevers	30	20	14	10	4	3	2	3
			Dysentery and Diarrhoea	3	2	2	2	...	2	1	...
			Respiratory diseases	33	19	2	3	...	3	2	2
			Injuries ... ..	...	...	3	...	...	...	...	...
			All other causes	42	48	8	9	5	3	4	6
			Total	108	89	29	24	9	11	9	11

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1915.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
93	82	58	50	88	78	48	41	52	48	35	28	412	373	
2	2	2	1	...	...	...	...	...	...	...	...	49	52	
66	41	537	488	223	262	249	231	219	237	91	98	1,491	1,442	
40	55	299	358	157	208	225	133	241	169	1,214	1,201	6,193	5,757	
20	22	26	23	28	20	30	22	51	30	62	52	232	191	1
19	17	32	31	108	88	113	121	131	103	149	106	577	490	
10	7	14	9	26	21	27	18	28	22	24	19	155	129	
59	35	80	57	51	69	40	36	...	...	...	...	2,796	2,323	
309	261	1,048	1,020	686	746	732	602	722	609	1,575	1,504	11,905	10,757	
28	14	57	53	45	31	33	26	24	12	16	19	312	244	
1	...	...	...	...	...	...	...	...	...	...	...	12	6	
51	35	97	117	81	96	53	58	48	35	30	48	477	545	
155	144	287	348	260	327	332	341	399	405	857	720	4,409	4,195	
5	4	5	11	7	8	10	10	12	10	17	25	108	102	2
4	17	40	44	35	37	77	55	123	98	205	208	560	533	
13	29	16	49	22	31	7	19	10	14	5	7	131	193	
20	18	59	93	41	46	42	45	56	22	97	51	3,224	2,678	
277	261	561	715	491	576	554	554	661	596	1,227	1,078	9,233	8,501	
6	5	15	15	17	12	8	10	11	10	2	...	82	62	
...	...	...	...	...	...	...	...	...	...	...	...	12	12	
55	45	103	97	76	72	66	55	57	50	65	66	570	555	
142	116	347	339	296	254	341	247	342	194	634	623	3,603	3,317	
11	9	24	18	29	24	38	32	45	41	47	30	250	191	3
40	32	56	56	69	77	95	95	103	114	245	215	648	629	
12	15	31	56	24	32	22	32	22	38	26	47	153	243	
16	27	43	91	33	35	45	39	59	59	180	187	3,599	3,418	
282	249	624	672	544	506	615	510	639	506	1,199	1,168	9,217	8,427	
41	25	57	33	73	63	68	47	45	38	52	40	365	259	
...	...	...	...	...	...	...	...	...	...	...	...	32	9	
218	185	433	409	343	374	185	194	178	212	146	189	1,956	2,090	
185	193	576	588	405	478	573	448	535	416	1,138	924	6,293	5,816	
19	16	21	14	21	13	23	16	20	15	23	16	173	115	4
25	50	64	64	93	76	107	79	84	78	128	105	649	568	
19	15	21	29	23	25	22	21	18	13	7	13	168	147	
23	17	69	70	62	55	76	63	94	60	124	156	3,815	3,342	
530	501	1,241	1,198	1,020	1,084	1,054	868	974	832	1,678	1,443	13,451	12,346	
8	5	10	3	7	10	5	8	11	3	6	3	59	38	
...	4	2	...	...	1	...	...	...	...	...	...	19	22	
174	57	526	509	478	442	325	419	426	320	314	310	2,743	2,754	
113	175	131	158	142	162	181	321	286	89	844	484	4,210	4,053	
37	17	36	24	51	44	52	11	20	17	29	22	352	221	5
55	64	100	93	155	100	222	49	50	95	270	182	1,737	1,634	
15	5	21	7	13	5	9	6	11	11	20	8	89	42	
50	60	192	199	68	191	199	62	130	194	210	317	1,811	1,959	
452	377	1,018	993	914	955	1,003	876	934	729	1,693	1,326	11,020	10,723	
...	...	...	...	1	1	...	...	...	...	...	...	1	1	
...	
...	
2	6	26	18	12	13	11	12	14	10	30	29	145	124	
1	1	2	2	1	2	1	1	5	6	5	3	21	20	6
5	5	5	7	10	5	...	2	3	2	4	5	64	53	
...	...	2	1	...	...	...	...	1	2	...	...	6	3	
6	3	5	9	13	5	16	5	15	6	31	13	145	107	
14	15	40	37	37	26	28	20	38	25	70	50	382	308	

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1915.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		No.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
44	42	100	58	58	55	52	35	37	25	27	42	400	375	7
...	
137	320	488	558	526	639	319	381	425	368	1,202	729	6,583	6,764	
52	32	60	98	43	49	64	70	47	12	83	69	653	592	
46	67	112	99	101	176	113	68	99	47	146	210	1,443	1,270	
22	9	19	6	13	7	18	9	6	5	20	10	153	81	
185	189	103	385	128	167	385	431	335	385	648	829	2,589	2,931	
487	660	885	1,205	870	1,095	952	996	949	843	2,127	1,891	11,930	12,028	8
...	3	3	3	4	6	7	3	5	1	4	1	34	28	
...	1	...	1	...	...	...	1	3	...	...	...	15	10
563	498	803	816	784	827	693	685	627	530	694	680	6,526	7,132	
200	264	486	645	488	544	603	513	554	430	2,012	1,619	7,858	7,697	
1	...	1	...	2	...	1	1	1	2	1	...	20	12	
17	30	69	75	80	67	82	60	93	41	231	115	1,255	850	
16	6	31	14	14	11	13	11	14	5	14	15	158	110	9
22	23	50	57	63	46	58	33	63	30	160	73	2,349	2,032	
819	825	1,443	1,611	1,435	1,501	1,457	1,307	1,360	1,039	3,116	2,503	18,215	17,871	
1	...	4	1	3	...	1	2	...	...	3	...	17	3
...	...	...	2	2	3	2	...	...	2	...	...	23	23
817	825	1,138	1,102	1,096	1,097	952	815	655	526	1,078	894	8,710	8,988	
197	178	315	343	300	327	355	335	386	382	1,180	1,135	5,130	5,274	10
6	...	12	6	13	9	10	8	18	17	52	42	226	188	
22	24	117	104	66	72	98	94	162	110	510	410	1,881	1,629	
7	2	18	5	6	5	15	6	8	3	30	9	165	86	
6	4	20	19	22	14	14	16	16	8	67	63	2,310	2,357	
1,056	1,033	1,624	1,582	1,508	1,527	1,447	1,276	1,245	1,048	2,920	2,553	18,462	18,548	
46	24	77	46	61	37	29	20	23	9	3	1	318	184	11
7	6	...	5	2	...	...	3	2	...	...	...	73	55
543	642	723	641	735	621	572	681	384	362	188	135	4,085	3,945	
307	247	285	305	191	371	244	187	205	224	390	313	3,005	2,926	
4	8	6	11	7	9	5	3	11	7	24	14	125	90	
29	22	25	34	96	78	112	44	88	62	92	87	779	668	
5	4	12	15	8	6	12	4	7	10	16	12	99	74	12
61	26	26	19	44	38	68	32	31	21	11	30	2,413	2,563	
1,002	989	1,154	1,078	1,145	1,160	1,042	974	751	695	724	592	10,897	10,505	
220	194	202	154	177	147	118	74	160	53	105	84	1,670	1,220	13
8	16	8	15	6	13	3	5	...	1	...	...	208	187
178	155	309	228	222	252	233	140	243	167	417	381	2,365	2,344	
386	339	380	427	331	291	306	301	277	242	859	649	6,659	6,111	
22	19	19	16	31	26	24	24	37	25	47	33	238	179	
66	56	91	82	117	123	118	103	96	79	180	183	845	798	
9	5	19	10	9	3	3	1	3	...	1	...	79	39	14
98	96	111	92	105	108	92	67	112	77	176	151	4,793	4,446	
987	820	1,139	1,024	998	963	897	715	868	644	1,755	1,481	16,857	15,324	
127	99	286	203	307	179	292	129	103	86	15	18	1,524	1,133	15
6	10	4	8	4	6	2	2	1	1	...	...	164	172
89	102	266	234	148	170	189	171	299	235	747	699	4,754	4,505	
563	509	920	867	777	592	725	574	637	348	1,437	1,037	8,509	7,726	
52	22	39	30	35	20	29	16	30	21	35	31	427	289	
43	43	199	152	95	127	78	72	65	75	186	121	1,132	903	
26	10	27	7	39	11	36	14	24	10	16	6	272	130	16
25	26	67	69	81	58	67	57	76	35	180	91	4,197	3,563	
931	822	1,808	1,575	1,486	1,163	1,418	1,035	1,265	811	2,616	2,093	20,979	18,426	

No. IV—CONTINUED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1915.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	No.
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
41	44	94	83	87	51	21	15	19	14	45	26	445	337	13
16	10	...	8	3	1	...	...	...	...	...	...	95	71
866	680	1,265	1,096	972	964	846	725	717	633	975	727	8,960	8,660	
115	146	667	611	416	311	409	366	426	413	1,728	1,417	8,018	7,964	
18	15	43	45	76	37	56	25	59	35	82	115	568	477	
93	117	123	209	213	241	164	192	203	64	107	96	2,041	1,973	
14	6	28	7	11	3	8	5	3	2	46	36	192	99	
52	66	62	50	69	70	88	20	31	17	104	99	3,159	2,924	
1,215	1,084	2,282	2,109	1,847	1,678	1,542	1,348	1,458	1,178	3,087	2,516	23,478	22,505	
6	2	9	8	10	6	6	6	1	4	35	26	14
...	1	...	...	...	...	...	...	...	...	...	...	26	26
693	723	1,349	1,305	1,175	1,147	1,131	1,129	998	1,003	765	627	8,765	8,569	
197	228	410	438	395	391	366	292	865	319	1,321	1,069	5,382	5,212	
53	44	60	39	60	42	48	37	51	30	52	33	478	359	
109	89	214	201	204	179	230	196	238	188	468	379	4,555	3,952	
16	9	24	10	15	8	12	10	13	7	9	3	152	80	
39	39	50	39	54	29	43	35	50	25	47	32	419	309	
1,113	1,135	2,116	2,040	1,913	1,802	1,841	1,705	1,716	1,576	2,662	2,143	19,812	18,533	
2	3	9	3	6	2	4	2	2	4	32	22	15
...	...	...	...	...	...	...	...	...	...	...	...	5	3
1,067	1,078	1,078	1,240	960	1,212	901	1,135	739	1,016	1,358	1,098	10,338	11,602	
250	262	329	386	335	293	364	213	364	207	1,006	882	6,450	6,040	
18	21	16	19	14	12	13	15	24	19	105	80	631	482	
105	105	102	99	84	83	82	61	107	80	383	383	2,128	1,902	
11	6	19	9	22	3	16	4	9	4	20	10	187	94	
66	70	91	61	89	77	92	74	109	101	444	411	2,259	2,077	
1,519	1,644	1,644	1,817	1,510	1,682	1,472	1,504	1,352	1,427	3,318	2,868	22,060	22,222	
40	30	50	29	59	30	31	19	46	17	57	11	360	182	16
...	...	...	...	...	...	...	...	...	...	...	...	1	1
441	469	924	751	904	750	826	731	717	643	1,516	885	8,959	8,129	
343	234	796	593	747	553	676	417	540	325	1,460	1,032	8,393	7,202	
10	7	21	7	18	13	13	9	26	14	18	14	183	134	
19	15	66	37	81	63	60	39	91	52	99	50	657	457	
3	4	55	27	61	31	39	28	33	20	22	26	300	175	
14	21	11	19	18	28	17	40	24	10	35	18	2,446	2,143	
870	780	1,923	1,463	1,888	1,468	1,662	1,283	1,486	1,081	3,205	2,036	21,299	18,433	
147	85	81	32	53	29	29	27	11	8	24	23	670	581	17
...	...	...	...	...	...	...	...	...	...	...	...	2	4
963	1,155	1,548	1,632	1,834	1,904	1,348	1,460	935	1,058	1,568	1,508	12,789	14,080	
366	404	366	397	305	283	217	242	235	164	394	380	4,080	3,945	
22	10	17	13	10	9	12	8	10	7	13	6	199	143	
104	79	128	94	139	87	91	73	71	70	105	69	1,159	944	
22	13	17	13	9	2	5	2	2	3	5	...	110	64	
123	95	129	120	125	116	115	94	103	93	122	84	1,538	1,331	
1,752	1,842	2,286	2,301	2,466	2,430	1,820	1,906	1,367	1,403	2,231	2,070	20,547	21,092	
28	21	33	25	19	19	9	13	3	6	1	2	122	106	18
...	...	...	...	...	...	...	...	...	...	...	...	21	15
411	424	548	622	552	619	582	551	574	366	318	482	4,520	4,761	
113	154	157	187	256	349	182	221	228	253	1,306	846	3,609	3,716	
29	17	19	15	19	16	14	16	7	12	3	2	187	111	
51	44	75	49	68	51	56	39	32	57	23	18	489	344	
27	25	28	16	23	15	14	9	4	3	3	1	176	144	
14	11	17	11	20	11	14	13	13	14	11	7	2,434	2,103	
673	696	877	925	957	1,080	871	862	861	691	1,665	1,358	11,758	11,270	

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5	6	7	8					
No.	Divisions.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.		
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
19	RAWALPINDI—CONCLUDED.	JHELUM.	Cholera	1	...	5	1	2	5	5	2	
			Small-pox ... ..	...	...	...	...	1	...	...	...
			Plague	123	122	300	388	563	735	561	745	
			Fevers	429	415	504	516	182	199	132	130	
			Dysentery and Diarrhœa	23	13	12	12	4	3	5	1	
			Respiratory diseases	33	32	25	13	10	6	13	25	
			Injuries ... ..	...	4	10	12	9	20	11	4
			All other causes	913	877	144	122	31	23	16	12	
			Total	1,522	1,463	1,000	1,064	802	991	743	919	
20		RAWALPINDI.	RAWALPINDI.	Cholera	6	9	14	6	6	5
				Small-pox	2
				Plague	98	78	313	341	605	793	684	837
	Fevers			580	529	695	692	245	272	220	178	
	Dysentery and Diarrhœa			759	653	159	155	21	22	6	7	
	Respiratory diseases			34	19	30	25	9	24	32	35	
	Injuries			4	1	8	10	17	13	18	12	
	All other causes			678	624	82	85	27	19	13	11	
	Total			2,153	1,904	1,295	1,317	938	1,149	979	1,085	
21	RAWALPINDI—CONCLUDED.	ATTOCK.	Cholera ... ..	...	...	...	...	...	...	...	...
			Small-pox ... ..	...	...	...	...	...	...	...	...
			Plague	86	106	232	233	349	462	371	430	
			Fevers	703	635	822	806	275	304	167	166	
			Dysentery and Diarrhœa	3	4	3	...	1	1	2	...	
			Respiratory diseases	7	4	12	19	11	9	11	10	
			Injuries	1	4	10	10	12	15	7	8	
			All other causes	853	754	47	34	9	8	11	9	
			Total	1,653	1,507	1,126	1,102	657	799	569	623	
22	RAWALPINDI—CONCLUDED.	MIANWALI.	Cholera ... ..	...	...	...	...	...	1	...	...
			Small-pox ... ..	...	1	...	...	1	3	...	...
			Plague ... ..	...	...	...	...	...	...	...	...
			Fevers	959	797	546	522	187	175	106	114	
			Dysentery and Diarrhœa	28	18	13	9	4	1	...	...
			Respiratory diseases	10	4	3	3	...	...	...	1
			Injuries... ..	1	1	10	16	10	14	9	5	
			All other causes	665	480	23	22	8	5	8	4	
			Total	1,693	1,301	595	572	210	199	123	124	
23	MULTAN.	MONTGOMERY.	Cholera ... ..	...	...	15	8	18	7	52	30
			Small-pox	5	6	10	5	6	5	1	2	
			Plague ... ..	...	...	9	2	15	35	53	65
			Fevers	1,466	1,477	939	946	184	215	78	78	
			Dysentery and Diarrhœa ... ..	...	...	2	...	5	3	1	2
			Respiratory diseases	33	17	7	4	9	3	5	15	
			Injuries	21	4	33	14	12	8	5	1	
			All other causes	446	310	174	232	96	61	16	25	
			Total	1,971	1,814	1,189	1,211	345	337	211	218	
24		MULTAN.	LYALLPUR.	Cholera	68	38	45	34	10	3	7	3
				Small-pox	10	8	15	10	19	17	8	2
				Plague	439	390	293	337	135	156	93	118
				Fevers	1,970	2,214	867	865	297	346	393	383
				Dysentery and Diarrhœa	30	24	15	16	7	7	7	6
				Respiratory diseases	60	39	47	37	19	5	19	6
				Injuries	29	23	33	21	12	8	18	7
				All other causes	1,083	1,079	657	603	74	89	65	70
				Total	3,689	3,815	1,972	1,923	573	631	615	595

No. IV—CONTINUED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1915.

9		10		11		12		13		14		15		No.
15 YEARS' AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1	...	4	3	2	6	3	3	2	2	...	3	25	25	19
...	...	...	...	...	...	...	...	...	...	...	...	1	...
380	376	797	946	945	1,153	921	1,086	752	822	1,020	1,098	6,362	7,471	
107	89	205	269	253	312	272	280	284	281	950	854	3,318	3,345	
2	...	14	5	18	5	16	4	11	8	29	16	134	67	
23	30	73	90	71	82	62	67	70	62	196	119	576	526	
4	4	25	11	17	5	18	3	14	5	23	10	131	78	
17	23	42	46	35	53	85	27	23	14	71	38	1,327	1,235	
534	522	1,160	1,370	1,341	1,616	1,327	1,470	1,156	1,194	2,289	2,138	11,874	12,747	20
6	3	25	19	16	14	12	10	8	7	9	8	97	81	
...	...	...	...	...	...	...	...	...	...	...	...	2	...
378	477	779	1,188	1,166	1,415	906	1,188	679	779	872	934	6,480	8,030	
141	133	371	443	477	537	466	440	394	369	1,064	868	4,653	4,461	
7	4	26	16	26	10	19	7	20	10	37	22	1,080	906	
29	34	93	112	108	102	108	77	75	55	145	108	659	591	
12	3	18	12	26	15	20	9	31	4	13	5	157	84	21
6	26	27	59	27	46	21	31	22	14	33	17	936	932	
579	680	1,339	1,849	1,844	2,139	1,550	1,762	1,214	1,238	2,173	1,962	14,064	15,085	
1	...	1	...	...	...	...	...	...	1	...	...	2	1
...	...	...	...	...	...	...	...	...	...	1	1	1	1
195	199	657	683	673	777	520	640	476	519	580	676	4,139	4,725	
112	102	359	399	482	481	450	381	435	874	997	894	4,803	4,542	
...	1	2	1	3	2	2	2	4	4	20	15	22
9	19	40	47	61	59	37	46	33	49	93	78	314	340	
7	3	23	11	16	10	10	7	7	1	11	10	104	79	
9	6	28	40	14	36	13	13	23	12	42	16	1,049	928	
333	330	1,110	1,181	1,249	1,365	1,032	1,089	974	956	1,728	1,679	10,431	10,631	
...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	1	...	1	...	...	...	...	...	...	...	...	1	6
97	71	168	184	216	255	253	228	321	261	749	621	3,632	3,228	23
1	1	4	4	6	3	13	7	11	7	42	26	122	76	
7	6	16	15	16	11	16	11	22	14	40	18	130	83	
4	1	10	2	10	3	3	3	3	...	4	6	64	51	
5	9	16	22	15	23	14	13	17	11	37	14	808	603	
114	89	214	228	264	295	299	262	374	293	872	685	4,758	4,048	
15	18	24	31	53	41	68	70	17	24	55	41	317	270	
2	5	24	23	
53	68	70	32	55	81	31	8	6	...	30	40	322	331	
64	32	151	206	157	119	105	167	174	129	661	574	4,009	3,943	
...	...	4	1	...	...	7	1	...	4	...	...	19	11
1	1	8	4	23	31	4	1	11	15	22	14	123	105	
2	2	11	15	10	24	24	5	18	11	31	11	167	95	
7	15	17	40	20	56	91	33	171	127	272	220	1,310	1,119	25
144	141	315	329	318	352	330	285	397	310	1,071	900	6,291	5,897	
10	3	6	3	7	4	4	4	5	2	39	21	201	115	
4	4	2	1	...	...	...	...	...	...	...	...	58	42
138	182	159	165	128	170	122	179	147	133	216	174	1,875	2,009	
320	294	249	287	303	326	375	318	316	335	867	698	5,957	6,066	
7	7	8	7	8	6	6	11	7	4	25	13	120	101	
13	8	12	11	15	9	20	7	13	4	54	26	272	152	26
24	6	24	10	13	12	20	8	15	8	29	20	217	123	
75	67	56	75	65	64	58	47	57	55	420	330	2,610	2,479	
591	571	516	559	539	591	605	574	560	545	1,650	1,282	11,310	11,037	

DEATHS REGISTERED ACCORDING TO SPECIFIED AGE PERIODS FROM DIFFERENT

1	2	3	4	5	6	7	8					
No.	Division.	Districts.	DISEASES.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5 YEARS.		5 YEARS AND UNDER 10 YEARS.		10 YEARS AND UNDER 15 YEARS.		
1	2	3	4	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
25	MULTAN—CONCLUDED.	JIANG.	Cholera ... ..	...	...	...	...	...	...	...	...
			Small-pox ... ..	...	2	...	...	...	1	...	...
			Plague	83	59	51	37	69	52	57	82	
			Fevers	1,361	1,296	469	493	89	77	71	52	
			Dysentery and Diarrhoea	21	18	9	14	14	11	7	5	
			Respiratory diseases	31	18	13	21	37	20	23	29	
			Injuries ... ..	...	...	...	...	...	...	6	...
			All other causes	816	580	165	112	93	131	95	99	
			Total	2,312	1,973	707	677	302	292	259	267	
26		MULTAN.	Cholera
			Small-pox	6	8	11	15	7	7	3	5	
			Plague ... ..	...	...	3	2	5	5	12	6
		Fevers	1,772	1,569	844	710	427	346	283	305		
		Dysentery and Diarrhoea	93	81	42	37	7	4	...	...
		Respiratory diseases ... ..	...	...	...	...	...	...	...	...
		Injuries	86	57	29	16	7	6	9	7		
		All other causes	1,116	961	222	173	79	70	56	52		
		Total	3,073	2,676	1,151	953	532	488	363	375		
27	MUZAFFARGARH.	Cholera ... ..	...	1	1	...	...	2	...	...	...
		Small-pox ... ..	...	1	...	1	2	2	1	3	
		Plague	2	1	1	2	2	3	6	6		
		Fevers	1,482	1,319	654	654	276	233	171	139		
		Dysentery and Diarrhoea	7	6	6	5	3	1	2	2		
		Respiratory diseases	8	2	9	7	3	2	3	...		
		Injuries	16	4	28	23	18	2	15	1		
		All other causes	425	352	27	16	25	16	8	15		
		Total	1,940	1,686	726	708	329	261	206	166		
28	DERA GHAZI KHAN.	Cholera ... ..	...	...	...	...	...	...	...	...	...
		Small-pox ... ..	...	1	...	1	...	...	...	...	...
		Plague ... ..	...	...	...	...	...	...	...	...	...
		Fevers	1,353	1,114	479	430	178	136	96	61		
		Dysentery and Diarrhoea	18	11	8	6	10	4	7	4		
		Respiratory diseases	20	15	15	9	11	3	7	8		
		Injuries ... ..	...	...	...	...	...	...	...	...	...
		All other causes	92	102	28	22	17	30	19	40		
		Total	1,483	1,243	530	468	216	173	130	113		
Total for the Province—												
		Cholera ... ..	...	196	213	693	647	718	634	759	532
		Small-pox ... ..	...	209	170	311	247	198	155	62	74
		Plague ... ..	...	5,991	6,239	10,484	10,605	10,082	12,240	10,463	12,959
		Fevers ... ..	...	34,648	33,017	21,946	22,055	9,051	10,048	6,720	7,109
		Dysentery and Diarrhoea ... ..	...	1,737	1,382	887	779	454	354	470	305
		Respiratory diseases ... ..	...	6,522	5,408	3,016	2,723	1,176	1,083	991	962
		Injuries ... ..	...	243	147	461	341	378	259	398	241
		All other causes ... ..	...	33,362	29,482	10,559	9,931	2,125	1,752	1,487	1,399
		Total ... ..	...	82,908	76,058	48,357	47,329	24,132	26,525	21,350	23,581
Population according to Census of 1911				424,654	404,431	997,515	931,872	1,482,324	1,259,701	1,321,272	931,615	
Ratio per 1,000 living for the Province—												
		Cholera ... ..	...	0.46	0.53	0.69	0.69	0.48	0.50	0.57	0.57
		Small-pox ... ..	...	0.49	0.42	0.31	0.27	0.13	0.12	0.05	0.08
		Plague ... ..	...	14.11	15.43	10.51	11.38	6.77	9.72	7.92	13.91
		Fevers ... ..	...	81.59	81.64	22.00	23.67	6.11	7.98	5.09	7.63
		Dysentery and Diarrhoea ... ..	...	4.09	3.42	0.89	0.84	0.31	0.28	0.36	0.33
		Respiratory diseases ... ..	...	15.36	13.37	3.02	2.92	0.79	0.86	0.75	1.03
		Injuries ... ..	...	0.57	0.36	0.46	0.37	0.26	0.21	0.30	0.26
		All other causes ... ..	...	78.56	72.90	10.59	10.66	1.43	1.39	1.13	1.50
		Total ... ..	...	195.24	188.06	48.48	50.79	16.28	21.06	16.16	25.31

NOTE.—The population of military cantonments by different ages cannot be

NOTE.—As the correct population of the different age periods according to the census of 1911 of the Punjab Province as at present constituted is not prior to the separation of the (new) Delhi Province,—vide Punjab Government

No. IV—CONCLUDED.

DISEASES IN THE DISTRICTS OF THE PUNJAB DURING THE YEAR 1915.

9		10		11		12		13		14		15		16
15 YEARS AND UNDER 20 YEARS.		20 YEARS AND UNDER 30 YEARS.		30 YEARS AND UNDER 40 YEARS.		40 YEARS AND UNDER 50 YEARS.		50 YEARS AND UNDER 60 YEARS.		60 YEARS AND UPWARDS.		TOTAL.		No.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
...	...	1	1	...	1	1	2	...	5	1	25
1	...	...	1	...	...	...	...	...	...	...	...	1	4
53	46	101	87	118	113	115	104	93	88	189	164	929	832	
33	53	102	111	107	73	128	143	248	181	891	731	3,499	3,210	
11	7	18	13	27	11	23	19	19	17	32	19	181	134	
27	35	51	27	41	37	36	23	29	19	97	51	385	280	
8	...	7	4	9	3	14	4	17	5	13	4	74	20	
40	45	143	185	149	230	186	158	114	93	87	76	1,888	1,709	
173	186	423	423	451	467	503	451	521	404	1,311	1,045	6,962	6,190	26
...	...	...	...	1	...	...	...	...	...	...	...	1	...
1	1	3	2	3	6	1	4	...	...	...	...	35	48
10	10	17	13	20	14	18	11	9	8	5	7	99	76	
332	358	518	495	602	506	713	603	745	630	1,143	971	7,379	6,493	
...	2	5	4	7	2	7	7	7	4	20	12	188	153	
...	...	...	...	...	...	1	1	...	...	...	...	1	1
10	5	13	10	17	16	18	8	16	6	25	8	230	139	
63	68	99	83	106	86	109	91	103	91	301	261	2,259	1,936	
421	444	655	607	756	630	867	725	880	739	1,494	1,259	10,192	8,846	27
...	...	...	...	...	...	...	1	...	...	1	...	2	4
1	...	1	1	1	2	...	...	...	...	...	...	7	11
3	3	8	8	16	7	10	5	5	5	13	7	66	47	
132	100	426	468	564	541	649	514	628	418	1,276	942	6,258	5,323	
...	...	5	2	2	4	7	5	3	3	9	8	44	36	
4	...	6	3	6	9	12	5	6	5	20	7	77	40	
15	1	23	17	20	9	16	4	13	9	22	15	186	85	28
7	7	36	43	32	32	22	23	21	7	25	13	628	524	
162	111	505	542	641	604	716	557	677	448	1,366	992	7,268	6,075	
1	3	1	1	2	4	1	3	...	...	...	...	5	11
...	...	...	...	...	...	...	...	...	...	...	...	1	2
...	
75	119	247	306	323	345	432	334	436	333	746	520	4,395	3,698	
10	6	12	8	13	5	14	9	15	9	9	6	116	68	29
6	5	18	25	20	15	24	11	30	20	35	40	186	151	
20	7	30	8	25	18	20	11	11	6	...	...	106	50
9	10	36	30	36	20	20	30	23	20	80	20	360	324	
121	150	344	373	419	407	541	398	515	358	870	586	5,169	4,304	
912	655	1,207	863	1,153	825	850	568	519	371	503	375	7,513	5,683	
49	61	22	46	21	32	8	15	7	5	1	1	888	806	
8,411	8,576	14,243	14,401	13,712	14,541	11,805	12,403	9,983	9,753	13,196	11,929	108,320	113,646	30
5,224	5,325	10,091	10,734	9,823	9,881	10,302	8,952	10,470	8,269	28,356	22,762	146,631	138,153	
418	293	525	455	575	401	557	396	567	385	905	713	7,095	5,463	
971	1,014	1,935	1,864	2,164	2,085	2,216	1,691	2,128	1,638	4,203	3,403	25,322	21,871	
353	201	586	390	501	334	441	261	365	227	465	311	4,181	2,712	
1,122	1,093	1,685	2,088	1,535	1,809	1,998	1,623	1,875	1,601	4,073	3,617	59,871	54,395	
17,460	17,218	30,294	30,836	29,537	29,908	28,177	25,914	25,914	22,249	51,692	43,111	359,821	342,729	
94,090	726,853	1,885,914	1,581,886	1,446,929	1,197,335	1,065,657	894,099	711,241	544,726	662,471	510,371	10,608,101	8,729,045	31
0.92	0.90	0.64	0.55	0.80	0.69	0.80	0.64	0.73	0.68	0.76	0.73	0.71	0.65	
0.05	0.08	0.01	0.03	0.01	0.03	0.01	0.02	0.01	0.01	0.001	0.001	0.08	0.09	
8.46	11.80	7.55	0.91	9.48	12.14	11.08	13.87	14.04	17.90	19.92	23.57	10.21	13.02	
5.26	7.33	5.35	6.79	6.79	8.25	9.67	10.01	14.72	15.15	42.80	44.00	13.82	15.83	
0.42	0.40	0.28	0.29	0.40	0.33	0.52	0.44	0.8	0.71	1.37	1.40	0.67	0.63	
0.98	1.40	1.03	1.18	1.50	1.74	2.08	1.89	2.99	3.01	6.34	6.67	2.39	2.51	
0.36	0.28	0.31	0.25	0.35	0.28	0.41	0.29	0.51	0.42	0.69	0.61	0.39	0.31	32
1.13	1.50	0.89	1.32	1.10	1.51	1.87	1.82	2.64	2.94	6.15	7.09	5.64	6.23	
17.56	23.69	16.06	19.49	20.41	24.98	26.44	28.98	36.43	40.84	78.03	84.47	33.92	39.26	

cluded, as it is not shown separately in the census returns.

available, the ratios shown in columns from 5 to 14 are calculated under the orders of the Local Government on the population of the Punjab as constituted Notification No. 2943 S., dated 1st October 1912.

ANNUAL FORM NO. V.

DEATHS REGISTERED ACCORDING TO CLASSES IN THE DISTRICTS
OF THE PUNJAB DURING THE YEAR 1915.

1	2	3					4					5					6
Number.	DISTRICTS.	POPULATION ACCORDING TO CENSUS OF 1911.					NUMBER OF DEATHS REGISTERED.					RATIO OF DEATHS PER 1,000 OF POPULATION.					Number.
		Muhammadans.	Hindus.	Native Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Native Christians.	Other classes.	Total.	Muhammadans.	Hindus.	Native Christians.	Other classes.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	AMBALA DIVISION.																
1	Hissar ...	218,600	585,995	79	215	804,889	6,004	16,657	1	...	22,662	27.47	28.43	12.66	...	28.16	1
2	Rohtak ...	113,493	600,168	1,136	37	714,834	3,037	14,694	3	...	17,734	26.76	24.48	2.64	...	24.81	2
3	Gurgaon ...	235,653	492,684	687	143	729,167	5,636	12,005	3	...	17,644	23.92	24.37	4.37	...	24.20	3
4	Karnal ...	224,920	578,947	836	84	799,787	7,348	18,436	13	...	25,797	32.67	32.12	15.55	...	32.25	4
5	Ambala ...	188,252	443,202	745	354	632,553	6,638	15,092	13	...	21,743	35.26	34.05	17.45	...	34.38	5
6	Simla ...	4,775	27,093	533	2,569	84,970	137	543	5	5	690	28.69	20.04	9.38	1.95	19.73	6
	JULLUNDUR DIVISION.																
7	Kangra ...	38,770	723,570	221	4,125	766,686	1,072	22,881	5	...	23,958	27.65	31.62	22.62	...	31.25	7
8	Hoshiarpur ...	281,805	633,786	2,954	24	918,569	11,079	24,984	23	...	36,086	39.31	39.42	7.79	...	39.29	8
9	Jullundur ...	352,329	434,503	1,107	17	787,956	19,249	17,750	11	...	37,010	54.63	40.85	9.94	...	46.97	9
10	Ludhiana ...	176,043	340,261	731	157	517,192	7,446	13,949	7	...	21,402	42.30	41.00	9.58	...	41.38	10
11	Ferozepore ...	408,380	524,056	915	148	933,499	16,726	15,451	4	...	32,181	40.96	29.48	4.37	...	34.47	11
	LAHORE DIVISION.																
12	Lahore ...	619,735	377,928	15,972	4,107	1,017,742	27,426	11,435	542	2	39,405	44.25	30.26	33.93	0.49	38.72	12
13	Amritsar ...	408,571	466,202	4,189	349	879,311	22,090	23,742	128	23	45,933	54.07	50.93	30.56	65.90	52.29	13
14	Gurdaspur ...	407,701	401,628	23,068	164	832,561	18,685	18,898	762	...	38,345	45.83	47.05	33.03	...	46.06	14
15	Sialkot ...	599,340	317,942	45,727	270	963,279	29,017	12,562	2,619	84	44,232	48.41	39.51	57.27	311.11	45.97	15
16	Gujranwala ...	622,430	234,773	16,117	99	923,419	29,860	8,624	776	472	39,732	47.97	30.28	43.15	?	43.03	16
	RAWALPINDI DIVISION.																
17	Gujrat ...	650,893	94,171	463	107	745,634	38,765	2,852	2	20	41,639	59.56	30.29	4.32	186.92	55.84	17
18	Shahpur ...	572,565	106,156	8,419	226	687,366	19,785	2,859	384	...	23,028	34.56	26.93	45.61	...	33.50	18
19	Jhelum ...	449,553	54,364	151	127	504,195	22,967	1,654	...	...	24,621	51.09	30.42	...	...	43.83	19
20	Rawalpindi ...	442,090	64,209	932	411	507,642	26,773	2,353	22	1	29,149	60.56	36.65	23.61	2.43	57.42	20
21	Attock ...	470,155	45,071	31	29	515,236	19,460	1,520	...	82	21,062	41.39	33.72	...	?	40.87	21
22	Mianwali ...	299,971	41,233	91	77	341,377	7,618	1,187	...	1	8,806	25.40	28.78	...	12.99	25.80	22
	MULTAN DIVISION.																
23	Montgomery...	376,174	127,368	459	114	504,115	9,392	2,751	26	19	12,188	24.97	21.60	56.64	166.67	24.18	23
24	Lyallpur ...	547,837	309,021	31,889	143	888,895	14,171	7,217	1,004	5	22,397	25.87	23.35	31.48	23.78	25.20	24
25	Jhang ...	422,468	92,857	177	24	515,526	10,212	2,929	2	10	13,152	24.17	31.53	11.30	416.67	25.51	25
26	Multan ...	660,320	140,359	334	312	801,375	15,095	3,938	1	4	19,038	22.86	28.06	2.60	12.82	23.7	26
27	Muzaffargarh	494,915	74,481	40	25	569,461	11,481	1,856	...	6	13,343	23.20	24.92	...	240.00	23.43	27
28	Dera Ghazi Khan	442,234	57,550	25	51	499,860	8,320	1,143	...	10	9,473	18.81	19.86	...	196.08	18.95	28
	Total for the Province.	10,729,972	8,434,583	168,078	14,513	19,337,143	415,489	279,961	6,256	744	702,550	38.72	33.19	40.21	51.26*	36.33	

*Figures incorrect due to misclassification.

ANNUAL FORM No. VI.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS (RURAL
CIRCLES) OF THE PUNJAB DURING THE YEAR 1915.

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE DISTRICTS

1	2	3	4	5	6	7	8	9	10					
Number.	A.—RURAL CIRCLES.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AMBALA DIVISION.														
1	Hissar	725,016	748	96	2,723	11,051	263	780	4	9	170	84	2	269
2	Rohtak	654,115	394	16	951	7,879	136	889	5	21	233	48	...	307
3	Gurgaon	675,175	137	17	1,032	6,628	329	1,033	11	41	259	69	...	380
4	Karnal	723,742	579	25	3,143	11,135	165	925	4	5	207	73	8	297
5	Ambala	577,034	69	40	5,211	7,569	409	2,997	3	3	79	31	3	119
6	Simla	16,036	1	...	...	121	36	77	...	...	5	...	...	5
JULLUNDUR DIVISION.														
7	Kangra	760,548	761	1	23	13,301	1,223	2,675	1	8	177	38	6	230
8	Hoshiarpur	864,823	53	19	13,286	14,759	19	1,841	5	3	195	38	1	242
9	Jullundur	691,816	5	29	16,221	9,393	186	2,867	1	...	205	6	5	217
10	Ludhiana	448,172	470	111	6,859	5,038	105	1,007	2	5	130	5	2	144
11	Ferozepore	878,765	2,836	392	4,560	12,213	333	1,469	3	3	104	2	...	112
LAHORE DIVISION.														
12	Lahore	758,826	2,373	322	8,675	11,677	248	779	7	4	199	57	3	270
13	Amritsar	711,530	674	127	16,671	13,408	666	1,762	9	6	165	13	5	128
14	Gurdaspur	784,343	52	18	16,934	9,925	722	8,017	3	3	180	25	...	214
15	Sialkot	855,399	45	7	20,942	11,487	865	3,261	2	6	185	41	10	244
16	Gujranwala	838,879	499	1	16,186	14,438	200	794	1	6	246	176	4	433
RAWALPINDI DIVISION.														
17	Gujrat	702,886	1,194	6	26,423	7,560	264	1,833	1	3	131	2	2	163
18	Shahpur	630,940	223	35	8,679	6,896	213	669	1	2	216	45	1	265
19	Jhelum	481,307	48	1	13,779	6,397	140	994	4	2	137	44	6	193
20	Rawalpindi	459,639	145	2	14,367	8,461	1,858	875	1	1	164	44	1	211
21	Attock	496,291	2	2	8,852	9,020	30	592	...	1	147	29	2	179
22	Mianwali	316,243	...	7	...	6,411	102	172	2	1	90	8	2	103
MULTAN DIVISION.														
23	Montgomery	479,837	585	44	383	7,497	22	185	3	...	161	83	1	251
24	Lyallpur	863,900	314	97	3,875	11,920	210	400	1	...	298	33	6	338
25	Jhang	475,527	5	5	1,612	6,185	193	546	1	1	16	66	4	88
26	Multan	709,294	1	46	2	12,405	118	...	...	...	227	115	1	343
27	Muzaffargarh	547,005	5	18	112	11,133	55	86	2	3	153	100	8	266
28	Dera Ghazi Khan	463,304	16	1	...	7,612	105	259	3	2	94	52	...	151
Total of the Rural Circles ...														
		17,590,392	12,234	1,485	211,501	261,519	9,215	37,784	80	139	4,573	1,357	83	6,232

(RURAL CIRCLES) OF THE PUNJAB DURING THE YEAR 1915.

11	12	13								14		15
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.								FROM ALL CAUSES.		Number.
		Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
3,865	19,795	1·03	0·13	3·76	15·24	0·36	1·08	0·37	5·33	27·30	31·26	1
5,220	15,792	0·60	0·02	1·46	12·05	0·21	1·36	0·47	7·98	24·14	38·94	2
6,536	16,092	0·20	0·03	1·53	9·82	0·49	1·53	0·56	9·68	23·83	45·5	3
6,154	22,423	0·80	0·03	4·34	15·39	0·23	1·28	0·41	8·50	35·98	42·02	4
3,277	19,691	0·12	0·07	9·03	13·12	0·71	5·19	0·21	5·68	34·12	36·83	5
117	357	0·06	...	...	7·55	2·24	4·80	0·31	7·30	22·26	23·21	6
5,578	23,792	1·00	0·001	0·03	17·49	1·61	3·52	0·30	7·33	31·28	29·18	7
4,018	34,237	0·06	0·02	15·36	17·07	0·02	2·13	0·28	4·65	39·59	33·73	8
3,990	32,918	0·01	0·04	23·45	13·58	0·27	4·14	0·31	5·77	47·57	31·38	9
4,382	18,116	1·05	0·25	15·30	11·24	0·23	2·25	0·32	9·78	40·42	35·13	10
8,586	30,501	3·23	0·45	5·19	13·90	0·38	1·67	0·13	9·77	34·71	30·36	11
5,824	30,168	3·13	0·42	11·43	15·39	0·33	1·03	0·36	7·68	39·76	29·89	12
5,148	38,654	0·95	0·18	23·43	18·84	0·04	2·48	0·28	7·24	54·33	38·16	13
570	36,452	0·07	0·02	21·59	12·65	0·92	10·22	0·27	0·73	46·47	34·83	14
3,715	40,566	0·05	0·01	24·48	13·43	1·01	3·81	0·29	4·34	47·42	32·64	15
4,002	36,553	0·59	0·001	19·29	17·21	0·24	0·95	0·52	4·77	43·57	31·80	16
2,612	40,655	1·70	0·01	37·59	10·76	0·38	2·61	0·23	3·72	56·99	26·27	17
4,070	21,050	0·35	0·06	13·76	16·93	0·34	1·06	0·42	6·45	23·36	24·22	18
2,376	23,928	0·10	0·002	28·63	13·29	0·29	2·07	0·40	4·94	49·71	26·40	19
1,421	27,340	0·32	0·004	31·26	18·41	4·04	1·90	0·46	3·09	59·48	29·07	20
1,873	20,550	0·004	0·004	17·84	18·17	0·06	1·19	0·36	3·77	41·41	26·75	21
1,293	8,058	...	0·02	...	20·27	0·32	0·54	0·13	4·09	25·58	25·49	22
2,247	11,214	1·22	0·09	0·80	15·62	0·05	0·29	0·52	4·68	23·37	20·57	23
5,048	22,202	0·36	0·11	4·49	13·80	0·24	0·46	0·9	5·84	25·70	24·53	24
2,910	11,544	0·01	0·01	3·39	13·01	0·41	1·15	0·19	6·12	24·28	24·53	25
3,068	15,983	0·001	0·06	0·002	17·49	0·17	...	0·48	4·33	22·53	23·38	26
973	12,648	0·01	0·03	0·20	20·35	0·10	0·6	0·49	1·78	23·12	26·45	27
533	8,677	0·03	0·002	...	16·43	0·23	0·56	0·33	1·15	18·73	21·30	28
99,406	639,376	0·70	0·08	12·02	14·87	0·52	2·15	0·35	5·65	36·35	30·83	

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE TOWNS

1	2	3	4	5	6	7	8	9	10					
No.	B.—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HISSAR DISTRICT.														
1	Hissar	17,162	1	3	1	208	23	50	...	1	4	2	...	7
2	Hansi	14,576	1	...	18	168	37	59	...	...	3	1	...	4
3	Bhiwani	31,100	8	1	191	315	76	122	...	1	2	...	...	3
4	Sirsa	14,629	27	...	...	193	22	51	...	1	...	...	...	1
5	Fattehabad	2,406	...	1	...	15	2	5	...	...	...	...	...	...
ROHTAK DISTRICT.														
6	Rohtak	19,862	33	1	8	238	29	71	...	...	1	...	...	1
7	Jhajjar	10,617	16	...	...	108	10	46	...	...	5	...	...	5
8	Beri	7,798	1	...	...	103	7	13	...	...	4	2	...	6
9	Gohana	5,438	111	...	63	72	10	34	...	1	1	2	...	4
10	Bahadurgarh	4,990	...	1	...	74	4	12	...	...	2	...	...	2
11	Sonepat	12,014	1	...	...	150	14	28	...	...	3	1	...	4
GURGAON DISTRICT.														
12	Rowari	24,780	4	...	...	10	66	142	...	2	4	...	...	6
13	Palwal	9,485	...	...	2	73	15	49	...	...	1	1	1	3
14	Firozpur	5,719	...	...	...	58	6	7	...	...	2	...	...	2
15	Hodal	5,468	...	...	91	54	11	10	...	...	1	...	...	1
16	Ballabgarh	4,053	3	7	...	45	7	14	...	...	3	...	...	3
17	Faridabad	4,487	...	...	...	62	7	22	1	...	...	...	...	1
KARNAL DISTRICT.														
18	Karnal	21,018	9	...	20	342	46	61	...	...	3	...	...	3
19	Kaithal	12,912	13	3	61	218	27	44	...	...	1	1	...	2
20	Panipat	26,342	23	8	555	306	29	125	...	...	9	...	...	9
21	Shahabad	11,054	...	5	233	63	6	38	...	...	1	...	...	1
22	Thanesar	4,719	...	...	34	45	15	24	...	...	3	...	...	3
AMBALA DISTRICT.														
23	Ambala	24,493	13	...	29	260	73	175	...	1	4	...	1	6
24	Jagadhri	12,045	5	...	119	255	35	53	...	...	2	1	...	3
25	Barya	4,272	...	...	3	74	5	16	...	...	...	...	...	...
26	Sadhaura	7,774	...	...	49	51	17	87	...	...	1	1	...	2
27	Rupar	6,935	10	1	86	54	24	43	...	...	...	1	...	1
SIMLA DISTRICT.														
28	Simla	18,934	1	...	...	148	5	40	1	...	3	...	...	4
KANARA DISTRICT.														
29	Kangra	3,620	1	...	...	31	21	23	...	...	1	1	...	2
30	Dharmasala	2,518	13	...	...	15	1	15	...	...	2	...	...	2
HOSHIAFPUR DISTRICT.														
31	Hoshiarpur	16,980	3	1	65	232	11	133	1	...	13	...	1	15
32	Rhampur	2,523	...	...	11	28	...	16	...	...	...	...	...	...
33	Hariana	5,395	...	...	60	100	...	9	...	...	1	...	...	1
34	Garhdiwala	3,093	...	...	9	36	1	18	...	...	2	...	...	2
35	Dasuya	3,597	...	...	45	72	1	23	...	...	...	...	...	...
36	Tanda Urmur	7,016	...	5	38	142	...	30	...	...	2	...	...	2
37	Miani	4,870	5	...	33	63	...	14	...	...	...	...	...	...
38	Mukerian	2,053	1	...	31	26	...	10	...	...	3	1	...	4
39	Una	4,178	...	...	79	48	...	7	...	...	1	...	...	1
40	Anandpur	4,041	...	...	1	49	...	4	...	...	1	...	...	1
JULLUNDUR DISTRICT.														
41	Jullundur	55,354	14	4	888	521	144	397	...	...	15	...	1	16
42	Kartarpur	8,631	1	...	144	84	18	68	...	...	3	1	...	4
43	Bangah	4,602	...	...	81	49	9	17	...	1	2	...	...	3
44	Rahon	6,292	...	1	16	96	13	21	...	...	2	...	...	2
45	Phillaur	5,224	...	5	50	60	4	33	...	...	3	...	...	3
46	Nurmahal	7,178	...	5	142	81	35	59	...	...	...	...	...	...
47	Nakodar	8,859	...	2	156	120	5	48	...	...	5	1	...	6

No. VI.

OF THE PUNJAB DURING THE YEAR 1915.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diar- rhœa.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
282	575	0·06	0·17	0·06	12·12	1·34	2·91	0·41	16·43	33·50	42·42	1
250	537	0·07	...	1·23	11·53	2·54	4·05	0·27	17·15	36·84	38·21	2
530	1,246	0·26	0·03	6·14	10·13	2·44	3·92	0·10	17·04	40·06	41·00	3
177	471	1·85	..	...	13·19	1·50	3·49	0·07	12·10	32·20	36·93	4
15	38	...	0·42	...	6·23	0·83	2·08	...	6·23	15·79	31·75	5
243	624	1·66	0·05	0·40	11·98	1·46	3·57	0·05	12·23	31·42	38·71	6
115	300	1·51	...	...	10·17	0·94	4·83	0·47	10·83	28·26	36·64	7
66	196	0·13	...	...	13·21	0·90	1·67	0·77	8·46	25·13	36·14	8
81	375	20·41	...	11·59	13·24	1·84	6·25	0·74	14·90	68·96	50·53	9
37	130	...	0·20	...	14·83	0·80	2·40	0·40	7·41	26·05	43·21	10
140	317	0·08	...	...	10·82	1·17	2·33	0·33	11·65	26·39	50·67	11
367	595	0·16	...	...	0·40	2·66	5·73	0·24	14·81	24·01	36·94	12
149	291	...	...	0·21	7·70	1·58	5·17	0·32	15·71	30·68	72·35	13
66	139	...	...	...	10·14	1·05	1·22	0·35	11·54	24·30	44·17	14
101	268	...	...	16·64	9·88	2·01	1·83	0·18	18·47	49·01	56·40	15
48	127	0·74	1·73	...	11·10	1·73	3·45	0·74	11·84	31·33	54·58	16
50	132	...	...	...	11·59	1·56	4·90	0·22	11·14	29·42	49·34	17
244	725	0·43	...	0·95	15·27	2·19	2·90	0·14	11·61	34·49	46·53	18
198	566	1·01	0·23	4·72	16·83	2·09	3·41	0·15	15·33	43·84	53·36	19
384	1,439	0·87	0·30	21·07	11·62	1·10	4·75	0·34	14·58	54·63	52·00	20
133	479	...	0·45	21·08	5·70	0·54	3·44	0·09	12·03	43·33	40·03	21
44	165	...	...	7·20	9·54	3·18	5·09	0·64	9·32	34·97	40·39	22
160	716	0·53	...	1·18	10·62	2·98	7·14	0·24	6·53	29·23	35·53	23
140	610	0·42	...	9·88	21·17	2·91	4·40	0·25	11·62	50·64	41·76	24
62	180	...	...	0·70	17·32	1·17	3·75	...	14·50	37·45	42·04	25
60	276	...	...	6·30	6·56	3·47	11·19	0·26	7·72	35·49	45·28	26
71	290	1·44	0·14	12·40	7·79	3·46	6·20	0·14	10·24	41·82	34·52	27
135	383	0·05	...	...	7·82	0·26	2·11	0·21	7·13	17·59	20·62	28
23	101	0·28	...	...	8·56	5·80	6·35	0·55	6·35	27·90	28·84	29
19	65	5·16	...	...	5·96	0·40	5·96	0·79	7·55	25·81	22·56	30
133	593	0·18	0·06	3·83	13·66	0·65	7·83	0·88	7·83	34·92	37·54	31
23	78	...	...	4·36	11·10	...	6·34	...	9·12	30·92	43·68	32
10	180	...	...	11·12	18·54	...	1·67	0·19	1·85	33·36	38·59	33
23	89	...	...	2·91	11·64	0·32	5·82	0·65	7·44	28·77	34·34	34
39	180	...	...	12·51	20·02	0·23	5·39	...	10·84	50·04	54·49	35
27	244	...	0·71	5·42	20·24	...	4·28	0·29	3·85	34·78	40·79	36
29	144	1·03	...	6·78	12·94	...	2·87	...	5·95	29·57	37·25	37
22	94	0·49	...	15·10	12·66	...	4·87	1·95	10·72	45·79	60·20	38
30	165	...	...	18·91	11·49	...	1·68	0·24	7·18	39·49	40·11	39
27	82	...	...	0·25	12·13	...	0·99	0·25	6·68	20·29	30·14	40
357	2,341	0·25	0·07	18·04	9·41	2·60	7·17	0·29	6·45	42·29	33·71	41
71	390	0·12	...	16·68	9·73	2·09	7·83	0·46	8·23	45·19	44·61	42
51	210	...	...	17·60	10·65	1·96	3·69	0·65	11·08	45·63	37·20	43
26	175	...	0·16	2·54	15·26	2·07	3·34	0·32	4·13	27·81	38·18	44
51	206	...	0·96	9·57	11·49	0·77	6·32	0·57	9·76	39·43	38·36	45
59	381	...	0·70	19·78	11·28	4·83	8·22	...	8·22	53·08	28·67	46
62	399	...	0·23	17·61	13·55	0·56	5·42	0·68	7·00	45·04	29·48	47

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8	9	10					
No.	B.—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LUDHIANA DISTRICT.														
48	Ludhiana ...	43,152	8	17	550	675	83	307	1	...	17	...	1	19
49	Jagraon ...	15,039	6	...	328	152	23	89	...	...	5	...	3	8
50	Rackot ...	7,510	7	...	251	36	3	27	...	...	2	...	...	2
51	Khanna ...	3,319	11	...	42	30	1	17	...	...	...	...	...	...
FEROZEPUR DISTRICT.														
52	Ferozepur ...	24,678	23	...	36	266	41	89	...	...	1	...	...	1
53	Zira ...	4,378	27	1	1	52	1	8	...	...	...	...	...	...
54	Dharmkot ...	5,859	4	...	53	29	4	22	...	...	1	...	...	1
55	Muktsar ...	8,834	...	...	31	81	23	12	...	...	1	1	...	2
56	Fazilka ...	10,985	...	2	28	129	15	43	1	...	1	...	...	2
LAHORE DISTRICT.														
57	Lahore ...	210,271	86	6	180	3,908	337	1,045	4	1	98	3	...	106
58	Chunian ...	7,151	9	1	3	96	25	21	...	...	2	1	...	3
59	Khudian ...	2,992	5	4	45	43	10	7	...	...	2	...	...	2
60	Kasur ...	24,783	135	2	207	374	66	115	1	...	14	1	...	16
61	Khem Karn ...	5,732	35	1	94	38	8	43	...	...	2	1	1	4
62	Patti ...	7,987	14	...	55	99	22	30	...	...	1	...	...	1
AMRITSAR DISTRICT.														
63	Amritsar ...	151,339	90	32	724	2,359	330	2,185	5	...	81	1	1	88
64	Majitha ...	5,223	12	1	55	57	21	20	...	...	3	...	...	3
65	Jandiala ...	6,959	2	5	125	124	10	22	...	...	1	...	...	1
66	Tarn Taran ...	4,260	4	1	45	34	18	25	...	...	1	...	...	1
GURDASPUR DISTRICT.														
67	Gurdaspur ...	5,133	2	...	84	50	12	71	...	...	1	...	...	1
68	Dina Nagar ...	4,154	3	1	10	94	8	33	1	...	1	...	...	2
69	Pathankot ...	7,007	...	1	62	72	30	66	...	...	...	...	...	...
70	Dalhousie ...	938	...	...	...	4	3	18	...	...	1	...	...	1
71	Batala ...	26,430	4	32	281	402	44	257	...	...	11	1	...	12
72	Dera Nanak ...	4,556	...	...	13	47	18	45	...	...	2	...	...	2
SIALKOT DISTRICT.														
73	Sialkot ...	48,595	6	...	264	449	128	437	1	...	17	...	1	19
74	Daska ...	6,046	1	...	28	41	14	30	...	...	3	...	...	3
75	Jamke ...	3,542	...	...	65	27	11	12	...	...	...	...	...	...
76	Pasrur ...	7,564	...	...	79	72	10	58	...	...	3	...	1	4
77	Zaffarwal ...	3,633	...	...	91	27	12	25	1	...	3	1	...	5
78	Narowal ...	4,464	...	...	7	52	3	38	...	...	...	...	...	...
79	Sambarial ...	6,285	...	...	14	58	13	19	...	...	1	...	...	1
80	Sahowala ...	3,558	2	...	75	23	15	11	...	...	...	...	...	...
81	Begowala ...	3,768	...	1	27	59	8	16	...	...	...	...	...	...
82	Bhopalwala ...	3,336	...	...	49	23	5	22	...	...	...	...	...	...
83	Mitranwali ...	3,183	...	...	100	54	10	20	...	...	2	...	...	2
84	Badomali ...	2,815	...	...	27	30	2	8	...	...	...	...	...	...
85	Kalaswala ...	2,915	...	...	42	13	10	32	...	...	1	...	...	1
86	Paud ...	3,481	...	...	...	46	1	7	...	...	...	...	...	...
87	Chawinda ...	4,695	...	...	160	29	6	34	...	...	1	1	...	2
GUJRANWALA DISTRICT.														
88	Gujranwala ...	28,637	18	1	248	454	51	135	2	3	20	...	...	25
89	Wazirabad ...	17,146	...	...	135	247	29	59	...	...	3	...	...	3
90	Eminabad ...	5,526	2	...	107	98	7	39	...	...	3	...	...	3
91	Kila Didar Singh ...	2,210	...	...	18	23	3	11	...	...	1	...	...	1
92	Akalgarh ...	3,943	...	...	8	26	2	13	...	...	1	...	...	1
93	Ramnagar ...	5,256	...	...	86	64	10	20	...	...	3	...	...	3
94	Sohdra ...	4,666	11	...	60	99	1	8	...	...	...	...	...	...
95	Hafizabad ...	5,742	1	...	24	45	5	14	...	...	2	...	...	2
96	Khangah Dogran ...	1,267	...	...	1	7	1	2	...	...	1	...	...	1
97	Pindi Bhattian ...	3,631	1	...	21	34	1	11	...	...	1	...	...	1
98	Sangla ...	980	8	...	5	19	...	1	...	...	...	...	1	1
99	Sharakpur ...	4,432	2	...	189	35	5	6	...	...	1	...	...	1
100	Shahkot ...	1,054	...	...	10	6	2	1	...	...	...	...	...	...

No. VI—CONTINUED.

TOWNS OF THE PUNJAB DURING THE YEAR 1915—CONTINUED.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
319	1,978	0·19	0·39	12·75	15·64	1·92	7·11	0·44	7·39	45·84	31·79	48
159	765	0·40	...	21·81	10·11	1·53	5·92	0·53	10·57	50·87	36·12	49
81	407	0·93	...	33·42	4·79	0·40	3·60	0·27	10·79	54·19	33·30	50
35	136	3·31	...	12·65	9·04	0·30	5·12	...	10·55	40·98	52·97	51
161	617	0·93	...	1·46	10·78	1·66	3·61	0·04	6·52	25·00	22·49	52
42	132	6·17	0·23	0·23	11·88	0·23	1·83	...	9·59	30·15	34·72	53
88	201	0·68	...	9·05	4·95	0·68	3·75	0·18	15·02	34·31	37·21	54
189	288	...	...	3·51	9·18	2·60	1·36	0·23	15·73	32·60	30·27	55
223	442	...	0·18	2·55	11·74	1·37	3·91	0·18	20·36	40·24	36·19	56
1,394	7,062	0·41	0·03	0·86	18·59	1·60	4·97	0·50	6·63	33·59	31·76	57
79	237	1·26	0·14	0·42	13·42	3·50	2·94	0·42	11·05	33·14	37·20	58
83	149	1·67	1·34	15·04	14·37	3·34	2·34	0·67	11·03	49·80	33·09	59
275	1,190	5·45	0·08	8·35	15·09	2·66	4·64	0·65	11·10	48·02	29·49	60
72	295	6·11	0·17	16·40	6·63	1·40	7·50	0·70	12·56	51·47	29·48	61
83	304	1·75	...	6·89	12·40	2·75	3·76	0·13	10·39	38·06	33·33	62
775	6,583	0·59	0·21	4·78	15·59	2·18	14·44	0·58	5·12	43·50	39·26	63
59	228	2·30	0·19	10·53	10·91	4·02	3·83	0·57	11·30	43·65	39·75	64
59	348	0·29	0·72	17·96	17·82	1·44	3·16	0·14	8·48	50·01	35·18	65
42	170	0·94	0·23	10·56	7·98	4·23	5·87	0·23	9·86	39·91	29·81	66
18	188	0·39	...	6·62	9·74	2·34	13·83	0·19	3·51	36·63	35·03	67
26	177	0·72	0·24	2·41	22·63	1·93	7·94	0·48	0·26	42·61	48·48	68
97	268	...	0·14	8·85	10·28	4·28	9·42	...	5·28	38·25	35·65	69
1	27	...	...	...	4·26	3·20	19·19	1·07	1·07	28·78	57·78	70
58	1,090	0·15	1·21	10·63	15·21	1·66	9·72	0·45	2·19	41·24	43·62	71
13	143	...	...	2·85	10·32	3·95	9·88	0·44	3·95	31·39	28·49	72
379	1,682	0·12	...	5·43	9·24	2·63	8·99	0·39	7·80	34·61	35·97	73
48	165	0·17	...	4·63	6·78	2·32	4·96	0·50	7·94	27·29	30·40	74
19	134	...	...	18·35	7·62	3·11	3·39	...	5·36	37·83	43·70	75
24	247	...	...	10·44	9·52	1·32	7·67	0·53	3·17	32·65	37·44	76
8	168	...	...	25·05	7·43	3·30	6·88	1·38	2·20	46·24	30·39	77
23	123	...	...	1·57	11·65	0·67	8·51	...	5·15	27·55	35·89	78
11	116	...	...	2·23	9·23	2·06	3·02	0·16	1·75	18·46	Not available.	79
26	152	0·56	...	21·08	6·46	4·23	3·09	...	7·31	42·72		80
13	124	...	0·27	7·17	15·66	2·12	4·25	...	3·45	32·91		81
13	112	...	...	14·69	6·89	1·50	6·59	...	3·90	33·57		82
21	207	...	...	31·42	16·97	3·14	6·28	0·63	6·60	65·03		83
8	75	...	...	9·59	10·66	0·71	2·84	...	2·84	26·64		84
6	104	...	...	14·41	4·43	3·43	10·98	0·34	2·06	35·68		85
15	69	...	...	...	13·21	0·29	2·01	...	4·31	19·82		86
7	233	...	...	34·08	6·18	1·28	7·24	0·43	1·49	50·69		87
242	1,174	0·63	0·03	8·66	15·85	1·78	4·71	0·87	8·45	41·00	35·36	88
128	601	...	...	7·87	14·41	1·69	3·44	0·17	7·47	35·05	29·50	89
41	297	0·36	...	19·86	17·73	1·27	7·06	0·54	7·42	53·75	32·46	90
9	65	...	...	8·14	10·41	1·30	4·98	0·45	4·07	29·41	32·31	91
8	58	...	...	2·03	6·59	0·51	3·30	0·25	2·03	14·71	16·28	92
46	229	...	...	16·36	12·18	1·90	3·81	0·57	8·75	43·57	35·16	93
22	201	2·36	...	12·86	21·22	0·21	1·71	...	4·71	43·08	34·33	94
20	111	0·17	...	4·18	7·84	0·87	2·44	0·35	3·48	19·33	27·10	95
11	23	...	...	0·79	5·52	0·79	1·58	0·79	8·68	18·15	20·36	96
20	89	0·28	...	5·78	9·36	0·28	3·03	0·28	5·51	24·51	37·62	97
2	36	8·16	...	5·10	19·39	...	1·02	1·02	2·04	36·73	51·02	98
36	274	0·45	...	42·17	7·81	1·12	1·34	0·22	8·03	61·13	29·54	99
2	21	...	...	9·49	5·69	1·90	0·95	...	1·90	19·92	Not available.	100

DEATHS REGISTERED FROM DIFFERENT CAUSES IN THE

1	2	3	4	5	6	7	8	9	10					
No.	B.—TOWNS.	Population according to Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	INJURIES.					
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Rabies.	Total.
									Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GUJRAT DISTRICT.														
101	Gujrat	18,692	6	...	127	263	33	123	...	...	10	...	...	10
102	Jalalpur	11,615	1	...	46	134	20	79	...	...	...	...	...	...
103	Kunjah	7,090	50	...	68	40	22	44	...	...	1	...	...	1
104	Dinga	5,351	...	...	205	28	3	24	...	...	...	...	...	...
SHAHPUR DISTRICT.														
105	Shahpur	8,739	...	1	128	53	12	8	...	...	...	...	...	...
106	Sahiwal	7,658	4	...	62	103	3	14	...	...	...	...	...	...
107	Bhera	15,202	...	...	44	255	32	63	...	...	11	1	...	12
108	Miani	5,819	1	...	42	95	4	24	...	...	6	...	...	6
109	Khushab	10,159	...	...	284	81	32	40	...	...	3	...	...	3
110	Sargodha	8,849	...	...	42	42	2	15	...	...	3	1	...	4
JHELUM DISTRICT.														
111	Jhelum	12,298	2	...	83	103	19	76	1	...	11	...	...	12
112	Pind Dadan Khan	10,590	...	...	21	163	42	32	...	...	3	1	...	4
RAWALPINDI DISTRICT.														
113	Rawalpindi	46,542	33	...	143	612	104	362	...	...	27	2	...	29
114	Murree	1,361	...	...	...	41	24	13	...	...	1	...	...	1
ATTOCK DISTRICT.														
115	Pindigheb	9,045	...	...	...	183	2	16	...	...	1	1	...	2
116	Hazro	9,950	1	...	12	141	3	46	1	...	1	...	...	2
MIANWALI DISTRICT.														
117	Mianwali	6,224	...	...	1	113	15	11	...	...	...	...	...	...
118	Bhakkar	5,388	1	...	...	130	...	9	...	...	3	...	...	3
119	Ira Khel	6,868	...	...	...	79	43	8	...	...	4	...	...	4
120	Kalabagh	6,654	...	...	...	127	38	13	...	...	5	...	...	5
MONTGOMERY DISTRICT.														
121	Montgomery	8,129	1	2	...	121	4	19	...	...	3	...	...	3
122	Kamalia	8,237	...	...	70	184	4	9	...	...	3	2	...	5
123	Pakpattan	7,912	1	1	200	150	...	15	...	...	2	1	...	3
LYALLPUR DISTRICT.														
124	Lyallpur	19,578	2	3	4	99	11	23	...	...	2	...	...	2
125	Gojra	5,417	...	...	5	4	...	1	...	...	...	...	...	...
JHANG DISTRICT.														
126	Jhang-Maghiana	25,914	1	...	116	384	87	69	...	...	2	3	...	5
127	Chiniot	14,085	...	...	83	140	35	50	...	...	...	1	...	1
MULTAN DISTRICT.														
128	Multan	85,747	...	33	172	1,319	209	1	...	...	17	6	...	23
129	Shujabad	6,384	...	4	1	143	14	1	...	...	3	...	...	3
MUZAFFARGARH DISTRICT.														
130	Muzaffargarh	4,119	...	...	...	70	7	6	...	...	...	...	...	...
131	Khangarh	3,349	1	...	...	93	10	6	...	...	...	...	...	...
132	Alipur	3,312	...	...	...	74	1	3	...	...	1	1	...	2
133	Leiah	8,173	...	...	...	122	6	12	...	...	...	...	...	...
134	Karor	3,503	...	...	1	94	1	4	...	...	1	...	2	3
DERA GHAZI KHAN DISTRICT.														
135	Dera Ghazi Khan	16,853	...	1	...	168	36	11	...	...	2	...	...	2
136	Jampur	6,517	...	...	...	96	17	16	...	...	...	...	...	...
137	Dajal	6,893	...	...	...	106	11	36	...	...	...	...	...	...
138	Rajapur	3,704	...	...	...	62	13	7	...	...	2	...	...	2
139	Kot Mithan	2,589	...	1	...	49	2	8	...	...	...	1	...	1
Total		1,746,754	962	209	10,465	23,265	3,343	9,409	22	12	563	49	15	661
Total of the Province		19,337,146	13,196	1,694	221,966	284,784	12,558	47,193	102	151	5,136	1,406	98	6,893

No. VI—CONCLUDED.

TOWNS OF THE PUNJAB DURING THE YEAR 1915—CONCLUDED.

11	12	13										14
All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.										No.
		Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
										For the year.	Mean ratio of the previous five years.	
16	17	18	19	20	21	22	23	24	25	26	27	28
123	685	0·32	...	6·79	14·07	1·77	6·58	0·53	6·58	36·65	32·60	101
52	332	0·09	...	3·96	11·54	1·72	6·80	...	4·48	28·58	32·65	102
69	294	7·05	...	9·59	5·64	3·10	6·21	0·14	9·73	41·47	31·11	103
13	273	...	...	38·31	5·23	0·56	4·49	...	2·43	51·02	20·26	104
36	238	...	0·11	14·65	6·06	1·37	0·92	...	4·12	27·23	17·32	105
76	262	0·52	...	8·10	13·45	0·39	1·83	...	9·92	34·21	32·67	106
169	575	...	...	2·89	16·77	2·10	4·14	0·79	11·12	37·82	35·51	107
80	252	0·17	...	7·22	16·33	0·69	4·12	1·03	13·75	43·31	36·02	108
86	126	...	...	27·96	7·97	3·15	3·94	0·30	8·47	51·78	33·35	109
20	125	...	...	4·75	4·75	0·23	1·70	0·45	2·26	14·13	not available.	110
105	350	0·16	...	2·68	6·38	1·54	6·18	0·98	8·54	28·46	31·57	111
81	343	...	...	1·98	15·39	3·97	3·02	0·38	7·65	32·39	36·11	112
438	1,721	0·71	...	3·07	13·12	2·23	7·76	0·62	9·39	36·90	38·03	113
9	88	...	...	...	30·12	17·63	9·55	0·73	6·61	64·66	31·15	114
48	251	...	...	...	20·23	0·22	1·77	0·22	5·31	27·75	33·08	115
56	261	0·10	...	1·21	14·17	0·30	4·62	0·20	5·63	26·23	26·01	116
23	162	...	...	0·16	18·16	2·41	1·77	...	3·53	26·03	21·58	117
45	183	0·19	...	...	24·13	...	1·67	0·56	8·35	34·89	36·34	118
11	145	...	...	...	11·50	6·26	1·16	0·53	1·60	21·11	24·84	119
40	223	...	...	...	19·09	5·71	1·95	0·75	6·01	33·51	34·05	120
50	200	0·12	0·25	...	14·88	0·49	2·34	0·37	6·15	24·60	19·90	121
93	365	...	...	8·50	22·34	0·49	1·09	0·61	11·29	44·31	32·24	122
39	409	0·13	0·13	25·28	18·96	...	1·90	0·38	4·93	51·69	26·62	123
38	182	0·10	0·15	0·20	5·06	0·56	1·17	0·10	1·94	9·30	15·83	124
3	13	...	...	0·92	0·74	...	0·18	...	0·55	2·40	not available.	125
893	1,055	0·04	...	4·48	14·82	3·36	2·66	0·19	15·17	40·71	34·41	126
294	553	...	...	2·34	9·94	2·48	3·55	0·07	20·87	39·26	42·84	127
1,085	2,842	...	0·38	2·01	15·38	2·44	0·01	0·27	12·65	33·14	30·76	128
42	213	...	0·63	0·16	23·37	2·21	0·16	0·47	6·63	33·63	33·82	129
16	99	...	...	...	16·99	1·70	1·46	...	3·88	24·03	29·91	130
30	140	0·30	...	...	27·77	2·99	1·79	...	8·96	41·80	41·45	131
32	112	...	...	...	22·34	0·30	0·91	0·60	9·66	33·82	36·90	132
72	212	...	...	...	14·93	0·73	1·47	...	8·81	25·94	29·51	133
29	132	...	...	0·29	26·83	0·29	1·14	0·86	8·28	37·68	37·40	134
73	291	...	0·06	...	9·97	2·14	0·65	0·12	4·33	17·27	22·20	135
38	167	...	...	...	14·73	2·61	2·46	...	5·83	25·63	27·28	136
16	169	...	...	...	15·38	1·60	5·22	...	2·32	24·52	30·26	137
22	106	...	...	...	16·74	3·51	1·89	0·54	5·94	28·62	34·77	138
2	63	...	0·89	...	18·93	0·77	3·09	0·39	0·77	24·33	37·08	139
14,860	63,174	0·55	0·12	5·99	13·32	1·91	5·39	0·38	8·51	36·17	34·97	
114,266	702,550	0·68	0·09	11·48	14·73	0·65	2·44	0·36	5·91	36·33	31·25	

APPENDIX TO ANNUAL FORM No. VI B.

DEATHS REGISTERED IN THE CANTONMENTS OF THE PUNJAB, DURING
THE YEAR 1915.

No.	CANTONMENTS.	Population according to the Census of 1911.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	INJURIES.					All other causes.	Total deaths from all causes.	Ratios of deaths per 1,000 of population.	Total births registered during the year.	Ratio of births per 1,000 of population.	No.
									Suicide.		Wounds and accidents.	Snake-bite and killed by wild beasts.	Total.						
									Males.	Females.									
1	2	4	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Ambala ...	54,223	4	1	...	347	18	119	...	...	10	...	10	443	942	17	1,204	22	1
2	Kasauli ...	3,194	...	...	...	19	3	8	...	...	...	9	9	27	66	21	72	23	2
3	Dagshai ...	2,032	1	...	...	4	3	...	...	...	...	...	...	32	40	20	34	17	3
4	Sabathu ...	1,847	...	...	...	19	...	1	...	...	...	...	...	11	31	17	35	19	4
5	Jatogh ...	471	...	...	...	...	2	...	...	...	2	...	2	9	13	28	7	15	5
6	Dharmsala ...	3,700	9	...	...	38	...	...	...	...	1	...	1	11	59	16	37	10	6
7	Jullundur ...	13,964	1	...	46	73	2	98	...	...	1	...	1	28	249	18	153	11	7
8	Ferozepore ...	26,158	19	...	56	332	25	87	1	...	7	...	8	195	722	28	746	29	8
9	Lahore ...	18,416	3	...	...	162	12	57	2	...	5	1	8	73	315	17	266	14	9
10	Amritsar ...	1,417	...	...	...	18	...	5	...	...	...	...	...	9	32	23	40	28	10
11	Dalhousie ...	644	...	...	...	2	...	5	...	...	...	...	...	10	17	26	9	14	11
12	Bakloh ..	3,566	...	...	...	20	15	...	...	...	...	...	...	5	40	11	70	20	12
13	Sialkot ...	16,274	...	...	7	60	33	78	...	...	1	...	1	79	258	16	290	18	13
14	Jhelum ...	7,380	...	...	...	2	1	...	...	...	...	...	...	4	7	1	3	...	14
15	Rawalpindi ...	39,841	...	...	5	317	5	...	...	...	2	...	2	47	376	9	430	11	15
16	Campbellpur ...	3,357	...	...	...	18	...	...	...	...	...	...	...	2	20	6	20	6	16
17	Murree ...	344	4	..	...	7	2	...	...	...	...	...	...	18	31	90	28	110	17
18	Barian*	30	...	...	...	...	...	...	...	...	...	...	...	1	1	33	5	167	18
19	Attock ...	630	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	19
20	Multan ...	13,496	1	...	...	78	1	3	...	...	...	...	...	50	133	10	98	7	20
Total ...		210,984	42	1	114	1,516	122	461	3	...	29	10	42	1,054	3,352	16	3,558	17	

*Figures for May and June only.

ANNUAL FORM No. VII.

DEATHS REGISTERED FROM CHOLERA IN THE DISTRICTS OF THE PUNJAB
DURING EACH MONTH OF THE YEAR 1915.

1	2	3	4	5														6			7			8	9	
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.												TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.	
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
	AMBALA DIVISION.																									
1	Hissar	27	10	963	55	...	...	...	13	236	384	123	29	...	...	...	...	412	373	785	0.94	1.02	0.98	0.002	1
2	Rohtak	19	15	731	40	...	...	...	18	275	254	9	...	...	...	...	...	312	244	556	0.81	0.74	0.78	0.07	2
3	Gurgaon	24	11	1,387	18	...	...	...	...	51	40	27	26	...	...	...	...	82	62	144	0.21	0.18	0.20	0.17	3
4	Karnal	25	17	1,382	94	...	...	...	28	122	242	106	30	6	...	...	...	365	259	624	0.83	0.72	0.78	0.13	4
5	Ambala	19	11	1,715	12	...	...	...	13	17	25	35	7	...	...	...	...	59	38	97	0.17	0.14	0.15	0.10	5
6	Simla	3	2	23	1	...	...	...	1	...	...	...	...	1	...	...	...	1	1	2	0.05	0.08	0.06	0.25	6
	JULLUNDUR DIVISION.																									
7	Kangra	17	11	713	89	3	...	4	87	519	146	...	...	16	...	...	...	400	375	775	1.00	1.02	1.01	0.10	7
8	Hoshiarpur	24	11	2,108	22	...	...	...	11	35	5	2	8	1	...	...	...	34	28	62	0.07	0.07	0.07	0.17	8
9	Jullundur	17	6	1,215	4	...	...	...	9	7	...	4	...	...	...	...	...	17	3	20	0.04	0.01	0.03	0.37	9
10	Ludhiana	14	12	858	108	...	...	...	13	19	116	174	174	6	...	...	...	318	184	502	1.08	0.82	0.97	0.19	10
11	Ferozepore	24	21	1,500	246	...	...	...	28	970	1,181	448	262	...	...	1	...	1,670	1,220	2,890	3.21	2.96	3.10	0.18	11
	LAHORE DIVISION.																									
12	Lahore	28	26	1,194	337	...	...	5	389	1,018	673	168	274	125	5	...	...	1,524	1,133	2,657	2.62	2.60	2.61	0.84	12
13	Amritsar	15	14	1,039	133	...	...	1	205	483	87	1	...	3	2	...	...	445	337	782	0.90	0.88	0.89	0.47	13
14	Gurdaspur	23	8	2,238	10	...	...	...	4	13	11	...	4	4	18	7	...	35	26	61	0.08	0.07	0.07	0.14	14
15	Sialkot	30	10	2,349	8	...	...	...	2	10	2	17	22	...	1	...	...	32	22	54	0.06	0.05	0.06	0.41	15
16	Gujranwala	30	27	1,736	63	...	...	...	14	210	122	150	17	29	...	...	...	360	182	542	0.69	0.45	0.59	0.07	16
	RAWALPINDI DIVISION.																									
17	Gujrat	15	15	1,326	210	...	...	...	...	100	39	585	515	12	...	...	...	670	581	1,251	1.67	1.68	1.68	0.17	17
18	Shahpur	23	9	1,034	23	...	...	...	1	61	51	13	97	...	...	...	...	122	106	228	0.32	0.34	0.33	0.02	18
19	Jhelum	14	5	898	8	...	...	...	...	28	5	13	1	3	...	...	...	25	25	50	0.10	0.10	0.10	0.02	19
20	Rawalpindi	16	10	1,177	46	...	...	...	7	31	13	2	84	41	...	...	...	97	81	178	0.36	0.34	0.35	0.03	20
21	Attock	13	3	628	2	...	...	...	1	1	...	1	...	...	...	...	...	2	1	3	0.01	0.004	0.01	0.15	21
22	Mianwali	15	1	396	1	1	1	...	0.01	0.002	0.01	0.13	22
	MULTAN DIVISION.																									
23	Montgomery	21	9	1,348	65	...	...	...	22	83	118	138	150	73	3	...	...	317	270	587	1.15	1.19	1.16	0.01	23
24	Lyallpur	20	16	1,277	69	...	...	...	6	87	92	33	96	2	...	...	...	201	115	316	0.40	0.30	0.36	0.14	24
25	Jhang	13	4	955	3	...	...	...	3	1	1	1	...	...	...	...	...	5	1	6	0.02	0.004	0.01	0.01	25
26	Multan	18	1	1,353	1	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	0.002	...	0.001	0.09	26
27	Muzaffargarh	23	3	960	2	...	...	...	1	5	...	...	...	...	...	...	...	2	4	6	0.06	0.02	0.01	0.01	27
28	Dera Ghazi Khan	23	3	707	4	...	...	...	1	8	...	...	...	7	...	...	...	5	11	16	0.02	0.05	0.03	0.08	28
	Total for the Province.	552	291	33,110	1,678	3	...	10	877	4,390	3,607	2,145	1,796	331	29	8	...	7,513	5,653	13,166	0.71	0.65	0.69	0.18		

DEATHS REGISTERED FROM SMALL-POX IN THE DISTRICTS

1	2	3	4	5								
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.						
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.	January.	February.	March.	April.	May.	June.	July.
1	2	3	4	5	6	7	8	9	10	11	12	13
	AMBALA DIVISION.											
1	Hissar	27	7	963	53	3	...	15	5	21	14	16
2	Rohtak	19	9	731	14	3	1	...	2	5	1	1
3	Gurgaon	24	7	1,367	12	1	1	4	11	3	3	...
4	Karnal	25	14	1,382	23	3	...	3	7	6	6	6
5	Ambala	19	13	1,715	38	5	1	3	4	13	3	3
6	Simla	3	...	23	...	...	...	...	...	...	...	...
	JULLUNDUR DIVISION.											
7	Kangra	17	1	713	1	...	...	1	...	...	...	...
8	Hoshiarpur	24	13	2,108	19	3	6	1	2	8	4	...
9	Jullundur	17	10	1,215	26	1	2	2	4	10	4	7
10	Ludhiana	14	11	858	97	2	1	7	9	27	17	17
11	Ferozepore	24	21	1,500	218	20	15	24	22	68	59	80
	LAHORE DIVISION.											
12	Lahore	28	23	1,194	137	6	7	17	23	44	82	46
13	Amritsar	15	15	1,039	81	1	8	10	11	42	33	17
14	Gurdaspur	22	11	2,238	10	...	1	...	3	6	6	2
15	Sialkot	30	6	2,349	7	...	1	1	...	...	1	1
16	Gujranwala	30	2	1,736	1	...	...	...	1	...	...	...
	RAWALPINDI DIVISION.											
17	Gujrat	15	5	1,326	5	1	...	2	1	1	...	...
18	Shahpur	23	9	1,054	22	1	1	2	9	10	8	3
19	Jhelum	14	1	898	1	...	...	...	...	...	...	1
20	Rawalpindi	16	1	1,177	2	1	...	...	...	...	...	1
21	Attock	13	2	628	2	...	...	...	...	1	...	...
22	Mianwali	15	5	396	7	1	...	...	...	1	...	3
	MULTAN DIVISION.											
23	Montgomery	21	5	1,348	7	2	3	3	1	8	9	7
24	Lyallpur	20	16	1,277	90	6	7	6	10	20	14	17
25	Jhang	13	2	955	7	...	1	...	1	...	...	...
26	Multan	18	13	1,353	33	4	2	...	5	6	13	13
27	Muzaffargarh	23	6	860	5	...	...	...	...	5	4	3
28	Dera Ghazi Khan	23	3	707	1	...	1	...	...	1	1	...
	Total for the Province ...	552	231	33,110	924	64	59	101	131	306	232	244

No. VIII.

OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1915.

					6			7		8			9	10
					TOTAL.			NUMBER OF DEATHS AMONG CHILDREN.		RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
August.	September.	October.	November.	December.	Males	Females.	Total.	Under one year.	Over one year and under ten years.	Males.	Females.	Total.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
8	4	6	1	8	49	52	101	16	70	0.12	0.14	0.13	0.90	1
...	1	1	1	2	12	6	18	6	6	0.03	0.02	0.03	0.12	2
...	...	1	...	...	12	12	24	14	8	0.03	0.04	0.03	0.46	3
4	2	1	3	...	32	9	41	15	21	0.07	0.02	0.05	0.28	4
2	1	1	3	2	19	22	41	8	24	0.05	0.08	0.06	0.72	5
...	...	...	...	...	...	...	...	...	...	...	...	...	0.19	6
...	...	...	...	...	...	1	1	...	1	...	0.002	0.001	0.06	7
1	...	...	...	...	15	10	25	2	15	0.03	0.02	0.03	0.56	8
6	6	1	3	...	23	23	46	10	25	0.05	0.07	0.06	0.87	9
11	17	10	7	3	73	55	128	27	62	0.25	0.25	0.25	0.96	10
34	23	23	13	14	208	187	395	126	172	0.40	0.45	0.42	1.79	11
87	28	21	13	12	164	172	336	65	197	0.28	0.39	0.33	1.51	12
17	8	7	3	9	95	71	166	21	93	0.19	0.19	0.19	0.74	13
3	2	3	8	18	26	26	52	2	47	0.06	0.07	0.06	0.33	14
1	2	...	...	1	5	3	8	4	3	0.01	0.01	0.01	0.81	15
...	...	...	...	1	1	1	2	1	1	0.001	0.002	0.002	0.45	16
...	...	1	...	...	2	4	6	2	3	0.004	0.01	0.01	1.10	17
...	1	1	...	...	21	15	36	12	22	0.05	0.05	0.05	1.28	18
...	...	...	...	...	1	...	1	...	1	0.003	...	0.001	1.06	19
...	...	...	...	...	2	...	2	...	2	0.01	...	0.004	0.80	20
1	...	...	...	...	1	1	2	...	...	0.003	0.004	0.003	1.35	21
...	1	1	...	...	1	6	7	1	4	0.01	0.04	0.02	0.51	22
2	1	2	5	4	24	23	47	11	26	0.09	0.10	0.09	1.66	23
7	3	7	1	2	58	42	100	18	61	0.12	0.11	0.11	1.30	24
...	1	2	...	...	1	4	5	2	1	0.003	0.02	0.01	0.85	25
6	4	5	16	9	35	48	83	14	40	0.08	0.13	0.10	0.34	26
4	...	2	...	...	7	11	18	1	5	0.02	0.04	0.03	0.48	27
...	...	...	...	...	1	2	3	1	1	0.003	0.01	0.01	1.07	28
144	105	96	77	85	688	806	1,694	379	911	0.08	0.09	0.09	0.82	

DEATHS REGISTERED FROM FEVERS IN THE DISTRICTS OF THE

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar	27	27	963	963	1,156	801	1,032	979	1,198	1,144
2	Rohtak	19	19	731	708	724	513	541	650	1,180	868
3	Gurgaon	24	24	1,367	1,153	706	375	440	483	713	618
4	Karnal	25	25	1,382	1,276	1,265	978	1,047	771	995	1,051
5	Ambala	19	19	1,715	1,671	786	656	666	594	774	747
6	Simla	3	3	23	22	17	16	17	29	38	27
	JULLUNDUR DIVISION.										
7	Kangra	17	17	713	706	882	749	909	858	1,441	1,178
8	Hoshiarpur	24	24	2,108	2,091	1,323	1,107	1,199	1,381	1,656	1,397
9	Jullundur	17	17	1,215	676	866	832	837	805	1,161	945
10	Ludhiana	14	14	858	677	530	395	468	439	573	588
11	Ferozepore	24	24	1,500	1,425	1,153	961	983	925	1,196	1,076
	LAHORE DIVISION.										
12	Lahore	28	28	1,194	1,087	1,335	975	1,025	1,087	1,869	1,732
13	Amritsar	15	15	1,039	1,017	1,375	1,157	1,320	1,263	1,952	1,637
14	Gurdaspur	22	22	2,238	1,479	923	771	774	615	1,041	1,092
15	Sialkot	30	30	2,349	2,166	1,160	932	1,034	899	1,332	1,161
16	Gujranwala	30	30	1,736	1,736	1,694	1,181	1,101	792	1,563	1,556
	RAWALPINDI DIVISION.										
17	Gujrat	15	15	1,326	1,248	775	584	548	346	418	476
18	Shahpur	23	23	1,054	1,054	738	557	544	416	609	655
19	Jhelum	14	14	898	895	762	613	466	368	465	529
20	Rawalpindi	16	16	1,177	927	872	693	716	634	741	690
21	Attock	13	13	628	618	1,058	771	721	585	647	644
22	Mianwali	15	15	396	390	637	548	612	492	535	545
	MULTAN DIVISION.										
23	Montgomery	21	21	1,343	755	1,126	747	649	458	711	626
24	Lyallpur	20	20	1,277	1,240	920	725	804	974	1,405	1,154
25	Jhang	13	13	955	908	725	504	522	518	577	498
26	Multan	18	18	1,353	1,349	1,911	1,307	1,211	869	1,152	937
27	Muzaffargarh	23	23	860	715	1,747	1,166	890	819	922	687
28	Dera Ghazi Khan	23	23	707	707	896	812	801	652	729	632
	Total for the Province	552	552	33,110	29,659	28,042	21,436	21,877	19,702	27,613	24,885

No. IX.

PUNJAB DURING EACH MONTH OF THE YEAR 1915.

						6			7			8	9
						TOTAL			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
1,083	851	730	761	876	1,339	6,193	5,757	11,950	14.12	15.71	14.85	17.86	1
709	556	439	520	758	1,151	4,409	4,195	8,604	11.44	12.73	12.04	17.19	2
470	394	444	455	726	1,096	8,603	3,317	6,920	9.26	9.76	9.49	17.04	3
1,154	843	795	736	1,112	1,362	6,293	5,816	12,109	14.38	16.06	15.14	20.95	4
706	537	611	646	735	815	4,210	4,053	8,263	11.73	14.73	13.06	20.13	5
22	20	17	31	18	17	145	124	269	6.59	9.57	7.69	8.35	6
1,083	966	1,383	1,489	1,190	1,219	6,583	6,764	13,347	16.52	18.37	17.41	17.95	7
1,176	1,116	1,150	1,273	1,220	1,557	7,858	7,697	15,555	15.67	18.46	16.93	19.44	8
829	729	715	710	873	1,102	5,130	5,274	10,404	11.64	15.18	13.20	14.50	9
543	444	361	457	541	592	3,005	2,926	5,931	10.24	13.08	11.47	12.45	10
1,083	935	872	933	1,125	1,527	6,659	6,111	12,770	12.78	14.81	13.68	12.09	11
1,444	1,263	1,150	1,141	1,374	1,841	8,509	7,726	16,235	14.63	17.71	15.95	14.85	12
1,349	1,193	1,041	1,032	1,253	1,405	8,018	7,964	15,982	16.18	20.75	18.18	16.32	13
936	795	798	851	978	1,020	5,382	5,212	10,594	11.55	14.22	12.72	13.98	14
998	873	851	913	1,034	1,303	6,450	6,040	12,490	12.15	13.96	12.97	14.86	15
1,347	1,193	979	943	1,303	1,943	8,393	7,202	15,595	16.19	17.78	16.89	17.27	16
820	664	804	773	792	1,025	4,080	3,945	8,025	10.18	11.43	10.76	13.82	17
669	593	468	496	663	1,117	3,809	3,716	7,525	10.11	11.97	10.95	13.06	18
507	457	479	481	669	867	3,318	3,345	6,663	12.65	13.82	13.22	16.13	19
618	627	588	717	925	1,263	4,653	4,461	9,114	17.38	18.59	17.95	18.77	20
663	592	561	621	929	1,552	4,802	4,542	9,344	17.76	18.55	18.13	18.82	21
502	489	430	498	584	968	3,632	3,228	6,860	20.19	19.99	20.10	19.24	22
546	551	446	440	653	999	4,009	3,943	7,952	14.52	17.29	15.77	13.46	23
1,084	1,004	813	787	969	1,384	5,957	6,066	12,023	11.83	15.75	13.53	12.75	24
484	491	443	442	594	911	3,499	3,210	6,709	12.63	13.46	13.02	14.53	25
977	759	763	960	1,294	1,732	7,379	6,493	13,872	16.95	17.74	17.31	17.46	26
754	598	615	922	1,110	1,356	6,253	5,328	11,586	20.30	20.41	20.34	22.50	27
520	518	435	611	749	738	4,395	3,698	8,093	16.13	16.26	16.19	17.36	28
23,106	20,055	19,181	20,639	25,047	33,201	146,631	138,153	284,784	13.82	15.63	14.73	16.31	

DEATHS REGISTERED FROM DYSENTERY AND DIARRHŒA IN THE

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from Dysentery and diarrhœa were reported.	Number in each district.	Number from which deaths from Dysentery and diarrhœa were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION										
1	Hissar	27	23	963	200	22	21	22	35	51	45
2	Rohtak	19	19	731	118	5	8	4	12	32	15
3	Gurgaon	24	24	1,367	179	33	29	26	31	53	35
4	Karnal	25	25	1,382	143	25	8	9	24	35	29
5	Ambala	19	19	1,715	333	36	22	33	46	61	59
6	Simla	8	8	23	23	2	3	...	2	4	9
	JULLUNDUR DIVISION										
7	Kangra	17	17	713	511	30	35	23	49	195	450
8	Hoshiarpur	24	13	2,108	19	1	4	2	4	5	3
9	Jullundur	17	17	1,215	164	25	24	19	49	44	47
10	Ludhiana	14	14	858	76	14	5	11	25	39	11
11	Ferozepore	24	23	1,500	802	28	17	21	30	48	40
	LAHORE DIVISION.										
12	Lahore	28	27	1,194	197	22	20	32	58	129	75
13	Amritsar	15	15	1,039	283	69	41	44	83	215	118
14	Gurdaspur	22	22	2,238	402	41	35	29	53	144	110
15	Sialkot	30	80	2,349	511	43	31	47	79	183	139
16	Gujranwala	30	22	1,736	143	21	18	30	32	55	28
	RAWALPINDI DIVISION.										
17	Gujrat	15	15	1,326	185	19	19	20	11	38	18
18	Shahpur	23	23	1,054	162	25	18	19	23	38	34
19	Jhelum	14	14	898	109	11	8	6	21	25	24
20	Rawalpindi	16	16	1,177	346	165	161	179	135	190	142
21	Attock	13	12	629	30	3	3	2	1	5	4
22	Mianwali	15	14	396	61	13	11	12	13	22	9
	MULTAN DIVISION.										
23	Montgomery	21	8	1,348	13	1	...	...	...	...	6
24	Lyalpur	20	20	1,277	217	6	7	18	24	51	13
25	Jhang	13	13	955	103	27	15	29	20	23	20
26	Multan	18	17	1,353	110	36	14	17	19	19	14
27	Muzaffargarh	23	19	860	38	14	10	4	5	9	7
28	Dera Ghazi Khan	23	19	707	79	21	9	10	6	9	15
	Total for the Province ...	552	503	33,110	5,057	750	596	668	893	1,722	1,519

No. X.

DISTRICTS OF THE PUNJAB DURING EACH MONTH OF THE YEAR 1915.

						6			7			8	9
						Total.			Ratio of Deaths per 1,000, of Population.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
34	62	30	27	45	29	232	191	423	0·53	0·52	0·53	0·44	1
19	17	18	15	30	85	108	102	210	0·28	0·31	0·29	0·35	2
31	29	35	29	70	40	250	191	441	0·64	0·56	0·60	0·90	3
43	31	25	24	24	11	173	115	288	0·40	0·32	0·36	0·53	4
66	53	45	41	62	49	352	221	573	0·58	0·80	0·91	0·76	5
3	7	4	1	6	...	21	20	41	0·95	1·54	1·17	1·73	6
132	69	51	69	74	68	653	592	1,245	1·64	1·61	1·62	1·03	7
3	3	2	2	2	1	20	12	32	0·04	0·03	0·03	0·07	8
25	42	80	29	47	33	226	188	414	0·51	0·54	0·53	0·52	9
27	18	13	9	25	18	125	90	215	0·43	0·40	0·42	0·43	10
29	20	27	61	58	38	238	179	417	0·46	0·43	0·45	0·35	11
56	46	61	72	72	73	427	289	716	0·73	0·66	0·70	0·55	12
99	94	64	65	91	59	568	477	1,045	1·15	1·24	1·19	0·86	13
55	63	69	81	91	76	478	359	837	1·03	0·98	1·01	0·92	14
95	92	90	108	123	83	631	482	1,113	1·19	1·11	1·16	0·94	15
24	18	29	22	15	25	183	134	317	0·35	0·33	0·34	0·22	16
84	15	36	57	41	34	199	143	342	0·50	0·41	0·46	0·38	17
20	17	13	29	36	26	187	111	298	0·50	0·36	0·43	0·26	18
15	13	18	26	19	15	134	67	201	0·51	0·28	0·40	0·39	19
114	166	150	142	222	220	1,080	906	1,986	4·03	3·78	3·91	3·16	20
4	3	2	2	4	2	20	15	35	0·07	0·06	0·07	0·12	21
13	5	26	25	21	26	122	76	198	0·68	0·47	0·58	0·63	22
1	6	1	4	10	1	19	11	30	0·07	0·05	0·06	0·13	23
8	14	27	19	19	16	120	101	221	0·24	0·23	0·24	0·38	24
24	31	31	26	31	38	181	134	315	0·65	0·56	0·31	0·55	25
22	25	43	48	42	42	188	153	341	0·43	0·42	0·43	0·39	26
2	5	4	7	8	10	44	36	80	0·14	0·14	0·14	0·17	27
11	12	17	20	23	31	116	68	184	0·43	0·30	0·37	0·33	28
1,009	976	951	1,060	1,305	1,009	7,095	5,463	12,558	0·67	0·63	0·65	0·57	

DEATHS REGISTERED FROM RESPIRATORY DISEASES IN THE

1	2	3		4		5					
No.	Districts.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
	AMBALA DIVISION.										
1	Hissar	27	24	963	272	123	78	107	83	104	86
2	Rohtak	19	19	731	364	79	55	86	92	93	101
3	Gurgaon	24	24	1,367	887	137	104	102	106	105	74
4	Karnal	25	25	1,882	312	98	87	94	76	143	116
5	Ambala	19	19	1,715	521	384	300	324	285	255	230
6	Simla	3	3	23	21	15	19	6	11	10	4
	JULLUNDUR DIVISION.										
7	Kangra	17	17	713	615	289	269	245	235	261	254
8	Hoshiarpur	24	24	2,108	799	221	173	174	184	206	166
9	Jullundur	17	17	1,215	314	394	357	399	317	365	229
10	Ludhiana	14	14	858	324	158	137	128	128	140	195
11	Ferozepore	24	24	1,500	508	156	129	169	129	178	156
	LAHORE DIVISION.										
12	Lafore	28	28	1,194	493	135	216	233	187	252	139
13	Amritsar	15	15	1,039	686	306	313	330	354	483	351
14	Gurdaspur	22	22	2,238	2,006	743	622	667	612	957	755
15	Sialkot	30	30	2,349	1,017	342	294	328	236	458	355
16	Gujranwala	30	30	1,736	281	96	114	118	120	117	93
	RAWALPINDI DIVISION.										
17	Gujrat	15	15	1,326	646	199	225	216	148	162	106
18	Shahpur	23	23	1,054	542	81	92	92	73	59	62
19	Jhelum	14	14	898	417	99	100	86	112	111	93
20	Rawalpindi	16	16	1,177	432	130	152	146	105	109	97
21	Attock	13	13	628	177	45	35	36	29	59	81
22	Mianwali	15	15	396	82	26	13	21	16	12	16
	MULTAN DIVISION.										
23	Montgomery	21	15	1,348	95	41	25	32	20	16	8
24	Lyallpur	20	20	1,277	395	34	24	61	35	61	30
25	Jhang	13	13	955	197	113	100	76	46	36	31
26	Multan	18	1	1,353	...	1	...	...	1	...	...
27	Muzaffargarh	23	22	860	63	21	21	16	10	10	2
28	Dera Ghazi Khan	23	17	707	70	66	47	53	21	29	14
	Total for the Province	552	519	33,110	12,036	4,532	4,101	4,346	3,821	4,791	3,759

DISTRICTS OF THE PUNJAB, DURING EACH MONTH OF THE YEAR 1915.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for pre- vious five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
68	71	47	37	67	196	577	490	1,067	1'32	1'34	1'33	1'29	1
79	64	61	79	101	203	560	533	1,093	1'45	1'62	1'53	2'43	2
88	79	63	54	116	248	648	629	1,277	1'66	1'85	1'75	2'72	3
130	115	76	62	77	143	649	568	1,217	1'48	1'57	1'52	2'21	4
228	191	170	196	337	471	1,737	1,634	3,371	4'86	5'94	5'33	2'60	5
7	6	8	11	9	11	64	53	117	2'91	4'09	3'35	5'06	6
176	162	198	172	176	276	1,443	1,270	2,713	3'62	3'45	3'54	2'38	7
140	131	126	144	162	278	1,255	850	2,105	2'50	2'04	2'29	2'43	8
212	210	165	167	268	427	1,831	1,629	3,510	4'27	4'70	4'45	4'33	9
84	87	68	92	126	194	779	668	1,447	2'65	2'99	2'30	2'40	10
102	93	110	122	108	191	845	798	1,643	1'62	1'93	1'76	1'60	11
125	118	129	128	181	197	1,133	908	2,040	1'95	2'08	2'00	1'74	12
316	273	285	308	343	352	2,041	1,973	4,014	4'12	5'14	4'56	3'34	13
631	624	727	705	715	749	4,555	3,952	8,507	9'77	10'78	10'22	10'47	14
321	279	324	318	294	431	2,123	1,902	4,030	4'01	4'40	4'18	4'32	15
82	64	71	60	62	112	657	457	1,114	1'27	1'13	1'21	0'80	16
160	165	151	175	174	222	1,159	944	2,103	2'89	2'74	2'82	2'77	17
46	46	36	43	65	138	489	344	833	1'30	1'11	1'21	0'83	18
102	80	66	74	72	107	576	526	1,102	2'20	2'17	2'19	1'51	19
67	64	65	60	78	177	659	591	1,250	2'46	2'46	2'46	1'68	20
42	47	50	67	63	100	314	340	654	1'16	1'39	1'27	0'86	21
13	13	12	15	23	33	130	83	213	0'72	0'51	0'62	0'56	22
19	3	8	15	19	22	123	105	228	0'45	0'46	0'45	0'30	23
15	16	31	30	26	61	272	152	424	0'54	0'39	0'47	0'92	24
32	19	13	19	57	123	385	280	665	1'39	1'17	1'29	1'08	25
...	...	...	...	...	...	1	1	2	0'002	0'002	0'002	0'02	26
4	2	3	2	5	21	77	40	117	0'25	0'15	0'21	0'11	27
13	21	21	13	17	22	186	151	337	0'68	0'66	0'67	0'47	28
3,302	3,043	3,084	3,168	3,741	5,505	25,322	21,871	47,193	2'39	2'51	2'44	2'26	

DEATHS REGISTERED FROM PLAGUE IN THE

1	2	3		4		5					
No.	DISTRICTS.	CIRCLES OF REGISTRATION.		VILLAGES.		MONTHS.					
		Number in each district.	Number from which deaths from plague were reported.	Number in each district	Number from which deaths from plague were reported.	January.	February.	March.	April.	May.	June.
1	2	3	4	5	6	7	8	9	10	11	12
AMBALA DIVISION.											
1	Hissar	27	7	963	91	162	891	520	1,287	487	11
2	Rohtak	19	10	731	22	19	68	163	556	209	7
3	Gurgaon	24	14	1,367	50	45	187	325	472	96	...
4	Karnal	25	25	1,382	125	272	479	1,071	1,537	630	11
5	Ambala	19	18	1,715	394	523	1,128	1,515	1,719	532	29
6	Simla	8	...	23	...	...	...	...	...	...	...
JULLUNDUR DIVISION.											
7	Kangra	17	2	713	9	...	...	11	10	2	...
8	Hoshiarpur	24	24	2,108	1,693	2,283	3,075	3,591	3,576	1,053	45
9	Jullundur	17	17	1,215	633	1,291	3,062	5,006	6,284	2,004	43
10	Ludhiana	14	14	853	429	594	1,217	2,037	3,079	1,080	22
11	Ferozepore	24	21	1,500	150	139	535	1,200	1,856	897	59
LAHORE DIVISION.											
12	Lahore	23	23	1,194	587	151	642	1,728	3,925	2,578	234
13	Amritsar	15	15	1,039	692	1,246	2,604	5,093	6,148	2,410	117
14	Gurdaspur	22	20	2,238	489	1,907	3,370	4,391	5,551	1,997	110
15	Sialkot	30	29	2,349	1,329	690	1,676	4,427	9,083	5,570	471
16	Gujranwala	30	30	1,736	520	1,587	2,410	4,705	5,679	2,495	222
RAWALPINDI DIVISION.											
17	Gujrat	15	15	1,326	936	590	1,476	4,877	10,687	8,854	368
18	Shahpur	23	23	1,054	233	263	573	2,019	4,664	1,605	109
19	Jhelum	14	14	898	374	703	1,478	3,114	5,463	2,698	257
20	Rawalpindi	16	14	1,177	669	1,150	1,888	3,064	4,606	3,249	481
21	Attock	13	10	628	222	62	147	831	3,555	3,553	590
22	Mianwali	15	1	396	...	...	...	...	1	...	...
MULTAN DIVISION.											
23	Montgomery	21	7	1,348	21	1	7	189	313	113	16
24	Lyallpur	20	18	1,277	140	147	532	1,073	1,441	671	20
25	Jhang	13	9	955	110	58	111	607	628	314	42
26	Multan	18	3	1,353	1	2	...	14	83	69	7
27	Muzaffargarh	23	3	860	6	...	1	57	48	7	...
28	Dera Ghazi Khan	23	...	707	...	...	...	...	...	...	...
Total for the Province		552	391	33,110	9,925	13,890	27,057	51,678	82,251	43,176	3,276

No. XII.

DISTRICTS OF THE PUNJAB, DURING EACH MONTH OF THE YEAR 1915.

						6			7			8	9
						TOTAL.			RATIO OF DEATHS PER 1,000 OF POPULATION.			Mean ratio per 1,000 for previous five years.	No.
July.	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
13	14	15	16	17	18	19	20	21	22	23	24	25	26
...	...	...	...	4	71	1,491	1,442	2,933	3.40	3.94	3.64	4.63	1
...	...	...	...	...	...	477	545	1,022	1.24	1.65	1.43	9.78	2
...	...	...	...	...	...	570	555	1,125	1.46	1.63	1.54	13.02	3
...	...	...	...	26	20	1,956	2,090	4,046	4.47	5.77	5.06	7.64	4
...	...	1	...	30	20	2,743	2,754	5,497	7.67	10.00	8.69	5.41	5
...	...	...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	9	14	23	0.02	0.04	0.03	0.72	7
3	2	...	4	23	3	6,526	7,132	13,658	13.01	17.10	14.87	5.87	8
3	...	...	...	...	...	8,710	8,988	17,698	19.77	25.88	22.46	0.48	9
1	...	...	...	...	...	4,085	3,945	8,030	13.92	17.64	15.53	7.51	10
10	1	...	...	...	12	2,365	2,344	4,709	4.54	5.68	5.04	4.43	11
1	...	...	...	...	...	4,754	4,505	9,259	8.18	10.33	9.10	2.63	12
2	...	...	...	...	...	8,960	8,660	17,620	18.08	22.57	20.04	7.62	13
8	...	...	...	...	...	8,765	8,569	17,334	18.80	23.38	20.82	8.11	14
39	9	...	1	2	2	10,368	11,602	21,970	19.53	26.82	22.81	5.69	15
...	...	...	...	...	...	8,959	8,139	17,098	17.29	20.09	18.52	7.69	16
17	...	...	...	...	...	12,789	14,080	26,869	31.92	40.81	36.04	1.79	17
28	...	...	12	8	...	4,520	4,761	9,281	11.99	15.33	13.50	2.27	18
31	1	3	17	46	19	6,362	7,471	13,833	24.26	30.88	27.44	1.56	19
32	1	3	8	...	10	6,480	8,030	14,510	24.20	33.47	28.58	1.01	20
58	6	...	1	...	2	4,139	4,725	8,864	15.31	19.29	17.20	0.19	21
...	...	...	...	...	...	1	...	1	0.01	...	0.002	...	22
1	...	...	1	1	11	322	331	653	1.17	1.45	1.30	1.58	23
...	...	...	...	...	...	1,875	2,009	3,884	3.72	5.21	4.37	2.07	24
1	...	...	...	...	...	929	832	1,761	3.35	3.49	3.42	1.08	25
...	...	...	...	...	...	99	76	175	0.23	0.21	0.22	0.03	26
...	...	...	...	...	...	66	47	113	0.21	0.18	0.20	0.001	27
...	...	...	...	...	...	...	...	...	...	...	...	...	28
235	20	7	44	162	170	108,320	113,646	221,966	10.21	13.02	11.43	4.33	

STATEMENT No. I.

MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH DISTRICTS AND
NATIVE STATES IN THE PUNJAB DURING THE YEAR 1915.

STATEMENT

MONTHLY STATEMENT OF PLAGUE OCCURRENCES IN BRITISH

Serial No.	District and Native States.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Hissar ...	239	162	466	391	732	520	1,601	1,287	414	487	11	11
2	Rohtak ...	26	19	94	68	230	163	723	556	273	209	9	7
3	Gurgaon ...	49	45	199	187	337	325	490	472	95	96	...	...
4	Karnal ...	280	272	492	479	1,078	1,071	1,569	1,537	635	630	48	11
5	Ambala ...	637	523	1,343	1,128	1,931	1,515	2,334	1,719	685	532	50	29
6	Simla ...	...	...	...	...	...	...	...	...	...	...	...	...
7	Kangra ...	...	...	...	...	16	11	14	10	3	2	...	...
8	Hoshiarpur ...	2,606	2,283	3,178	3,075	3,825	3,591	3,697	3,576	1,145	1,053	45	45
9	Jullundur ...	1,555	1,302	2,948	3,082	7,782	5,010	10,249	6,295	2,618	2,004	100	48
10	Ludhiana ...	814	594	1,612	1,217	3,851	2,037	5,034	3,079	1,846	1,080	14	22
11	Ferozepore ...	309	139	773	541	1,541	1,216	2,556	1,884	1,558	903	87	59
12	Lahore ...	290	151	963	642	2,476	1,728	6,200	3,925	3,588	2,578	779	234
13	Amritsar ...	1,246	1,246	2,604	2,604	5,093	5,093	6,148	6,148	2,410	2,410	117	117
14	Gurdaspur ...	2,298	1,907	3,952	3,370	4,983	4,391	6,394	5,551	2,258	1,997	200	110
15	Sialkot ...	740	690	1,681	1,676	4,467	4,427	9,231	9,090	5,595	5,510	475	471
16	Gujranwala ...	1,632	1,587	2,710	2,410	5,775	4,705	5,880	5,679	2,575	2,495	222	222
17	Gujrat ...	619	590	1,562	1,476	5,096	4,877	10,848	10,687	8,890	8,854	388	368
18	Shahpur ...	492	263	929	573	2,690	2,019	7,342	4,664	3,293	1,605	159	109
19	Jhelum ...	962	708	1,814	1,478	4,608	3,114	6,249	5,463	2,389	2,696	268	257
20	Rawalpindi ...	1,490	1,154	2,439	1,888	3,617	3,064	5,344	4,606	4,299	3,249	388	481
21	Attock ...	112	62	157	147	981	881	3,622	3,555	3,670	3,558	628	590
22	Mianwali ...	...	...	...	...	...	...	3	1	...	...	...	...
23	Montgomery ...	1	1	8	7	249	189	402	313	148	113	18	16
24	Lyallpur ...	213	147	602	532	1,916	1,073	1,644	1,441	660	671	80	20
25	Jhang ...	60	58	114	111	946	607	683	628	385	314	125	42
26	Multan ...	4	2	...	...	23	14	181	83	95	69	9	7
27	Muzaffargarh ...	...	...	1	1	67	57	73	48	8	7	...	...
28	Dera Ghazi Khan ...	...	...	...	...	...	...	...	...	...	...	...	...
	Total British Districts	16,674	13,905	30,641	27,083	64,310	51,698	98,511	82,297	49,535	43,182	4,220	3,276
1	Patiala ...	642	623	1,624	960	2,024	1,626	4,918	4,093	7,246	6,631	788	685
2	Kapurthala ...	933	547	1,288	890	1,840	1,109	983	614	390	262	...	...
3	Malerkotla ...	7	5	235	141	699	432	348	231	11	12	...	...
4	Jind ...	149	72	207	101	437	202	600	336	92	78	4	4
5	Kalsia ...	7	4	3	1	65	28	206	99	52	33	2	...
6	Faridkot ...	223	94	660	301	265	111	17	6	...	...	...	...
7	Nabha ...	88	68	199	185	320	295	824	725	169	185	21	15
8	Pataudi ...	...	...	...	...	...	...	...	...	...	...	...	...
9	Bahawalpur ...	...	...	...	...	7	6	...	...	1	1	...	...
10	Nagarh ...	...	...	2	1	7	2	48	27	21	16	1	1
11	Bilaspur ...	...	...	...	...	...	...	...	...	...	...	...	...
	Total Native States ...	2,049	1,413	4,218	2,580	5,664	3,811	7,944	6,131	7,982	7,218	816	705
	GRAND TOTAL ...	18,723	15,318	34,859	29,663	69,974	55,509	106,455	88,428	57,517	50,400	5,036	3,981

No. 1.

DISTRICTS AND NATIVE STATES IN THE PUNJAB DURING THE YEAR 1915.

JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		TOTAL.		Serial No.	REMARKS.
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.		
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
...	...	...	...	...	...	...	...	12	4	83	71	3,558	2,933	1	
...	...	...	...	...	...	...	...	...	...	...	...	1,355	1,022	2	
...	...	...	...	...	...	...	...	...	...	...	...	1,170	1,125	3	
...	...	...	...	...	...	...	...	44	26	25	20	4,171	4,046	4	
...	...	...	...	1	1	...	...	38	30	32	20	7,051	5,497	5	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	
...	...	...	...	...	...	...	...	...	...	...	...	33	23	7	
3	3	2	2	...	...	4	4	25	23	3	3	14,533	13,658	8	
1	3	...	...	...	...	...	...	...	...	1	...	25,254	17,744	9	
...	1	...	...	...	...	...	...	...	...	...	...	13,171	8,030	10	
12	10	18	1	...	...	1	...	...	...	25	12	6,880	4,765	11	
1	1	...	...	...	...	...	...	...	...	...	...	14,297	9,259	12	
2	2	...	...	...	...	...	...	...	...	...	...	17,620	17,620	13	
12	8	...	...	...	...	...	...	...	...	...	...	20,097	17,334	14	
39	39	9	9	2	...	2	1	5	2	3	2	22,249	21,977	15	
...	...	...	...	...	...	...	...	...	...	...	...	18,794	17,098	16	
17	17	...	...	1	...	...	...	...	...	...	...	27,421	26,869	17	
89	28	...	...	...	...	19	12	9	8	...	...	15,022	9,281	18	
69	31	5	1	4	3	37	17	53	46	21	19	16,479	13,633	19	
20	32	3	1	4	3	12	8	47	19	17	10	17,680	14,515	20	
98	58	2	6	...	...	3	1	9	4	6	2	9,288	8,864	21	
...	...	...	...	...	...	...	...	...	...	...	...	3	1	22	
1	1	...	...	...	...	1	1	1	1	...	11	829	653	23	
...	...	...	...	...	...	...	...	...	...	...	...	5,115	3,884	24	
27	1	...	...	...	...	...	...	...	...	...	...	2,340	1,761	25	
...	...	...	...	...	...	...	...	...	...	...	...	312	175	26	
...	...	...	...	...	...	...	...	...	...	...	...	149	113	27	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	
391	235	39	20	12	7	79	44	243	163	216	170	264,871	222,080		
114	99	8	8	9	9	...	...	3	3	20	20	17,396	14,757	1	
...	...	...	...	...	...	...	...	...	...	...	...	5,434	3,422	2	
...	...	...	...	...	...	...	...	...	...	...	...	1,300	821	3	
...	...	...	...	...	...	...	...	...	...	15	9	1,504	802	4	
...	...	...	...	...	...	...	...	...	...	37	18	372	183	5	
...	...	...	...	...	...	...	...	...	...	...	...	1,165	512	6	
...	...	...	...	...	...	...	...	...	...	...	...	1,621	1,473	7	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	
...	...	...	...	...	...	...	...	...	...	...	...	8	7	9	
...	...	...	...	...	...	...	...	...	...	...	...	79	47	10	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	
114	99	8	8	9	9	...	...	3	3	72	47	28,879	22,024		
505	334	47	28	21	16	79	44	246	166	288	217	293,750	244,104		

